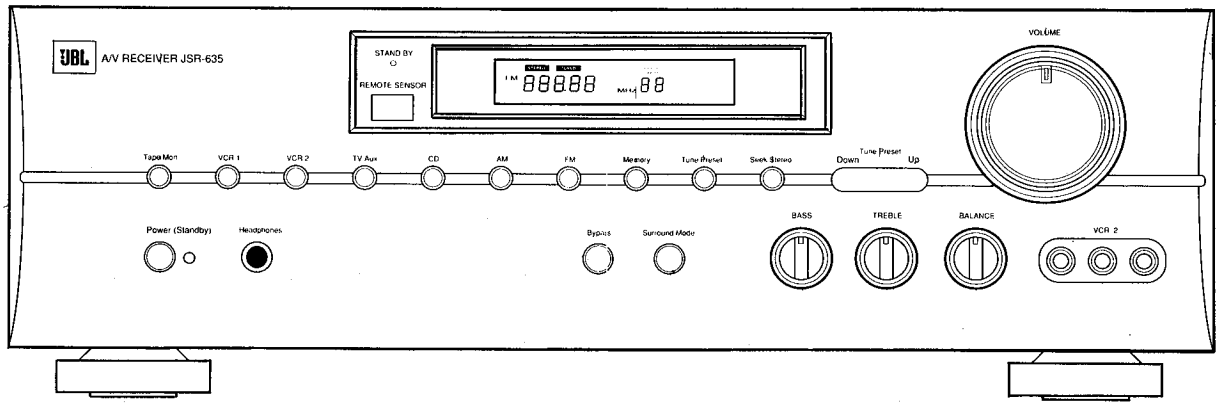
JBL

Model JSR635

Manual A

AUDIO AND VIDEO RECEIVER

Technical Manual



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JBL

Parts and Service Office
80 Crossways Park West, Woodbury, N.Y. 11797
1112-JSR635A G9604 1200 Printed in Korea

SPECIFICATIONS

⊙ FRONT AMP SECTION

	Nominal	Limit
RMS Output Power		
(STEREO MODE), Input: CD	≥ 35 W	≥ 30 W
THD: 0.2%, 8 ohms		
Both Channel Driven (20 Hz - 20 kHz)		
THD at 35 W, 8 ohms, Input: CD		
20 Hz	≤ 0.09%	≤ 0.2%
1 kHz	≤ 0.09%	≤ 0.2%
20 kHz	≤ 0.09%	≤ 0.2%
IM Distortion at 35 W, 8 ohms, Input: CD		
60:7000 Hz = 4:1	≤ 0.1%	≤ 0.2%
Input Sensitivity		
CD, AUX, VCR	190 ± 15 mV	190 ± 30 mV
S/N Ratio Input Shorted at Volume Max. (WTD IHF-A)		
CD, AUX	≥ 95 dB	≥ 90 dB
TV, VCR1,2	≥ 85 dB	≥ 80 dB
Tone Control		
Bass: 50 Hz	+10 dB	+10 ± 2.0 dB
	-10 dB	-10 ± 2.0 dB
Treble: 10 kHz	+10 dB	+10 ± 2.0 dB
	-10 dB	-10 ± 2.0 dB
Frequency Response (CD/AUX)		
20 Hz, 20 kHz	± 1.0 dB	± 1.5 dB
Channel Crosstalk Input Shorted		
1 kHz	≥ 60 dB	≥ 50 dB
10 kHz	≥ 50 dB	≥ 45 dB

⊙ CENTER AMP SECTION

	Nominal	Limit
RMS Output Power		
THD (0.9%, 8 ohms, 1 kHz)		
Only Center Channel Driven	≥ 45 W	≥ 30 W
S/N Ratio		
Input Shorted, IHF-A WTD	≥ 70 dB	≥ 65 dB
Frequency Response at -3 dB		
Normal	100 Hz - 20 kHz	120 Hz - 15 kHz
Wide	20 Hz - 20 kHz	50 Hz - 15 kHz

⊙ REAR AMP SECTION

	Nominal	Limit
RMS Output Power		
THD (1%, 8 ohms, 1 kHz)		
Both Rear Channel Driven	≥ 22 W	≥ 20 W
S/N Ratio (Input Shorted, IHF-A WTD)		
Dolby	≥ 60 dB	≥ 55 dB
Frequency Response at -3 dB		
8 ohms, Dolby Pro-Logic	80 Hz - 7 kHz	100 Hz - 6 kHz

⊙ VIDEO AMP SECTION

	Nominal	Limit
Input Sensitivity/Impedance		
VCR1, VCR2	1 V_{P-P}/75 Ω	1 V_{P-P}/75 Ω
Output Level/Impedance		
VCR1, REC out, TV Monitor out		
	1 V_{P-P}/75 Ω	1 V_{P-P}/75 Ω
Frequency Response at -3 dB	DC-10 MHz	5 - 6 MHz
Crosstalk at 1.0 MHz	≥ 50 dB	≥ 45 dB

⊙ FM SECTION

	Nominal	Limit
Tuning Cover Range		
USA/Canada: 75 kHz DIV.	87.5 - 107.9 MHz	
Europe: 40 kHz DIV.	87.5 - 108.0 MHz	
Usable Sensitivity (75 ohms Input)		
USA/Canada: 30 dB S/N	≤ 14.2 dbf	≤ 17.2 dbf
Europe: 26 dB S/N		
Image Rejection (at 106 MHz)		
USA/Canada	≥ 40 dB	≥ 35 dB
Europe	≥ 80 dB	≥ 70 dB
IF Rejection (at 90 MHz)	≥ 90 dB	≥ 80 dB
Full Limiting (at -3 dB)	≤ 12.2 dbf	≤ 15.2 dbf
50 dB Quieting Sensitivity (at 98.1 MHz, 100% MOD.)		
IHF Band Pass Filter		
Mono	≤ 21.3 dbf	≤ 24.3 dbf
Stereo	≤ 44.3 dbf	≤ 47.3 dbf
	Nominal	Limit
Distortion (1 kHz, 100% MOD. at 98.1 MHz)		
IHF Band Pass Filter		
Mono	≤ 0.3%	≤ 0.5%
Stereo	≤ 0.5%	≤ 0.7%
S/N Ratio (1 mV Input, 100% MOD. at 98.1 MHz)		
IHF Band Pass Filter		
Mono	≥ 67 dB	≥ 63 dB
Stereo	≥ 65 dB	≥ 60 dB
Frequency Response (at +1.5 dB, -3 dB)		
	20 Hz - 15 kHz	40 Hz - 14 kHz
AM Rejection Ratio (100 uV - 20 mV Input)		
	≥ 50 dB	≥ 45 dB
Search Level (at 98.1 MHz)	15(11-24) uV	15(10-25) uV
Automatic Stereo Threshold (at 98.1 MHz)		
	15(11-24) uV	15(10-25) uV
Muting Threshold (at 98.1 MHz)	15(11-24) uV	15(10-25) uV
Overload at 98.1 MHz		
(100% MOD. 100 mV RF Input)	≤ 0.3%	≤ 0.5%
Suprious Response (at 98.1 MHz)		
Antenna Input 3 uV	≥ 70 dB	≥ 60 dB
Capture Ratio at 40/60 dbf	≤ 2 dB	≤ 2.5 dB
Alternative Channel Selectivity (at 98.1 MHz ± 400 kHz)		
	≥ 65 dB	≥ 55 dB
Stereo Separation (at 98.1 MHz, 100% MOD., 1 mV Input)		
IHF Band Pass Filter		
100 Hz	≥ 35 dB	≥ 30 dB
1 kHz	≥ 35 dB	≥ 30 dB
10 kHz	≥ 30 dB	≥ 25 dB
Output Voltage (at 100% MOD., 1 kHz Input)		
Mono	500 mV	500 ± 150 mV
Stereo	450 mV	450 ± 150 mV

⊙ AM SECTION

	Nominal	Limit
Tuning Cover Range		
USA/Canada: 10 kHz Step	520 - 1710 kHz	
Europe: 9 kHz Step	522 - 1611 kHz	
Usable Sensitivity (400 Hz, 30% MOD., S/N 20 dB)		
	≤ 500 uV/m	≤ 1000 uV/m
Image Rejection (at 1400 kHz)	≥ 35 dB	≥ 30 dB
IF Rejection (at 600 kHz)	≥ 50 dB	≥ 45 dB
AGC Figure of Merit (From 100 mV/m at 1000 kHz)		
	≥ 50 dB	≥ 45 dB
Distortion (400 Hz, 30% MOD. 5 mV/m Input)		
	≤ 0.8%	≤ 1.5%
IF Bandwidth (6 dB Down, 350 uV/m)		
	6(5-10) kHz	6(4-11) kHz
Audio Response (5 mV/m Input 1 kHz 0 dB, 1000 kHz)		
at -6 dB	80 Hz - 2.2 kHz	100 Hz - 2 kHz
Selectivity (at 350 uV/m)		
± 10 kHz	≥ 25 dB	≥ 20 dB
S/N Ratio (1000 kHz, With Antenna Input 5 mV/m)		
	≥ 40 dB	≥ 37 dB
RF Overload (400 Hz 80% MOD, 100 mV/m Input)		
	≤ 5%	≤ 10%
Search Level (at 1000 kHz)	800 uV ± 5 dB	800 uV ± 6 dB
Output Voltage (400 Hz 30% MOD., 5 mV/m Input)		
	200 ± 30 mV	200 ± 40 mV
Whistle	≤ 10%	≤ 15%

⊙ GENERAL

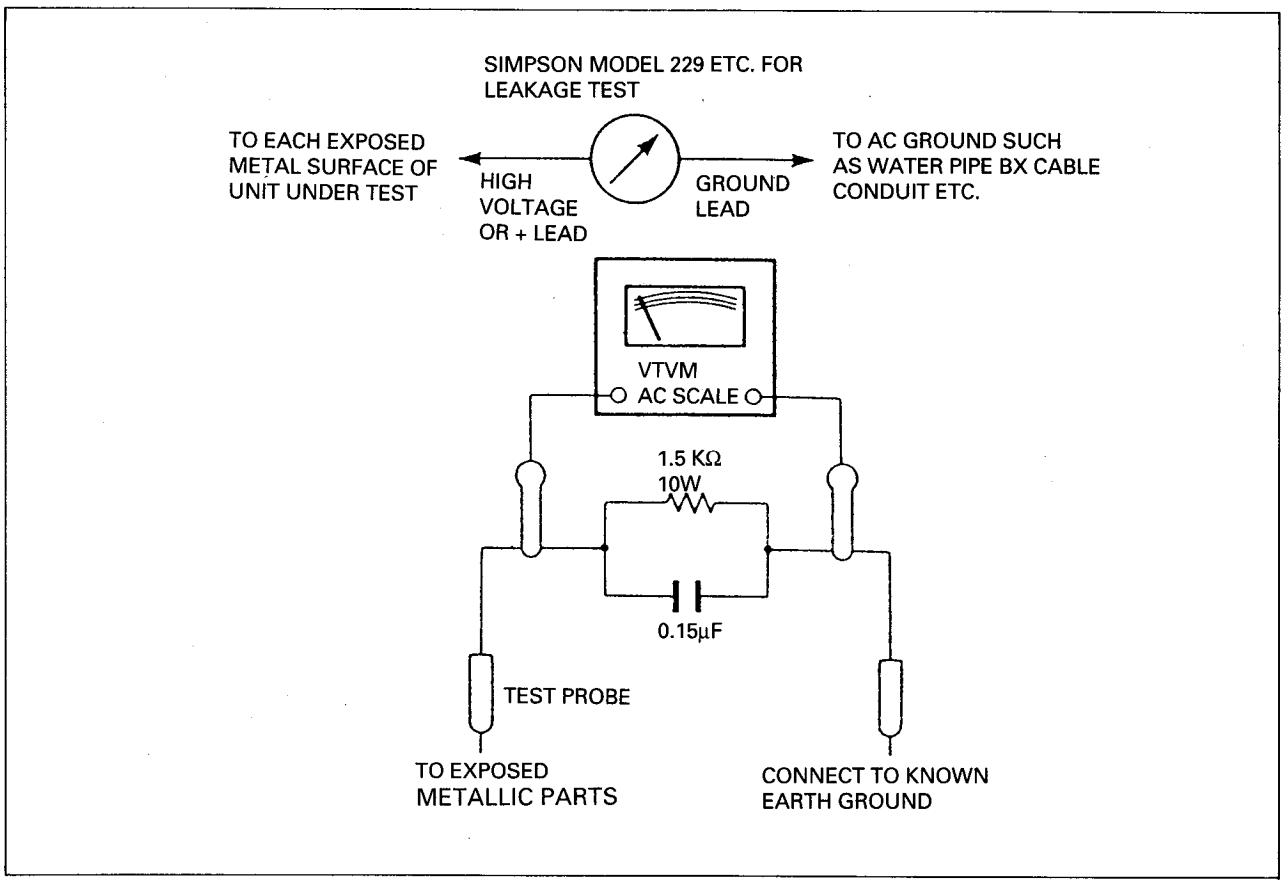
Power Consumption;	
USA/Canada	140 W
Europe	450 W
Power Supplies;	
USA/Canada	AC 120 V, 60 Hz
Europe	AC 230 V, 50 Hz
Dimensions (W × H × D);	
inches	$17^{5/16} \times 4^{7/8} \times 14^{15/16}$
mm	440 × 142 × 330
Weight (lbs/kgs)	18 lbs, 8.2 kg

These specifications are service target specs.
Specifications and components are subject to change without notice.
Overall performance will maintained or improved.

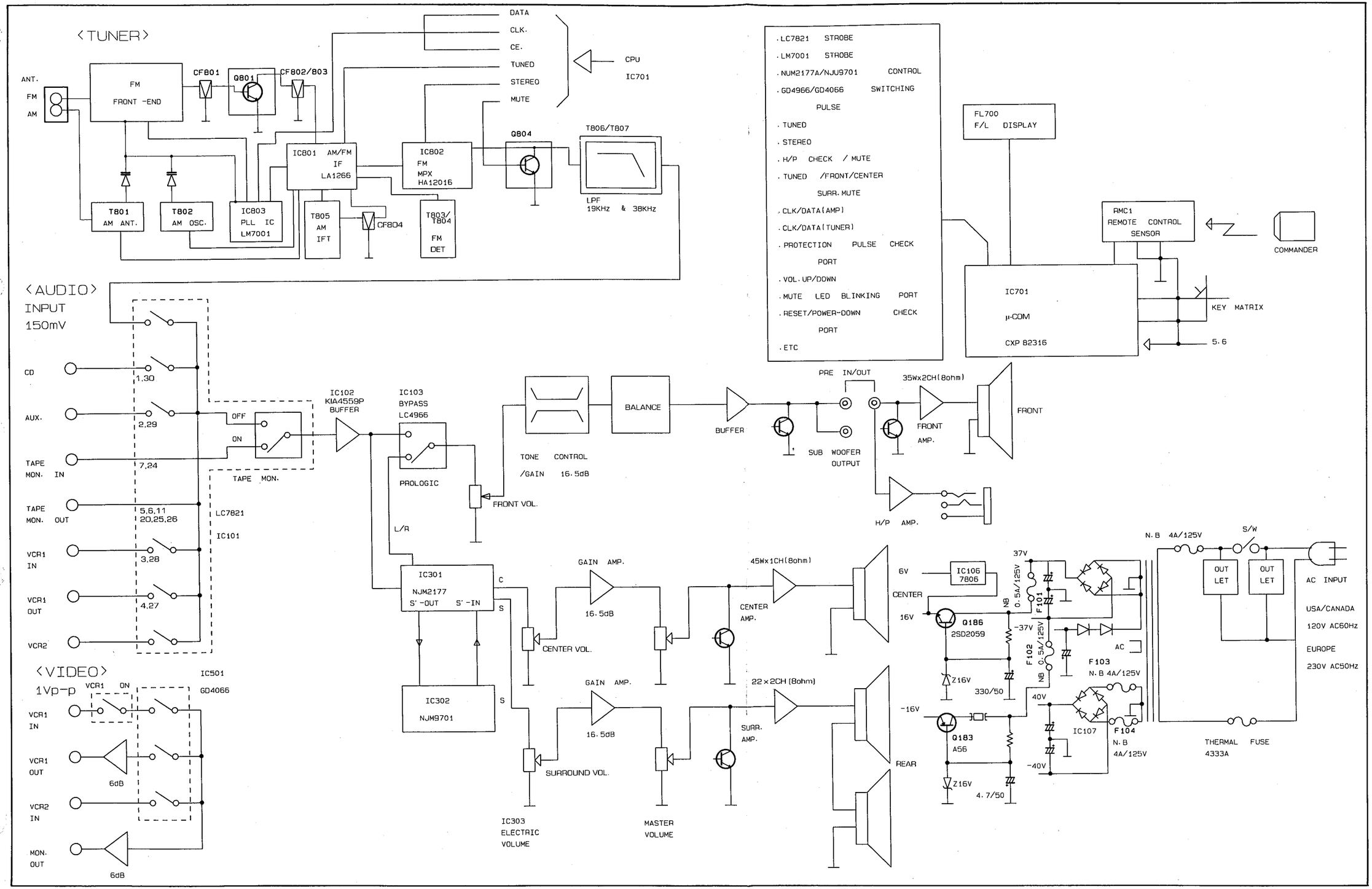
LEAKAGE TEST

Before returning the unit to the user, perform the following safety checks:

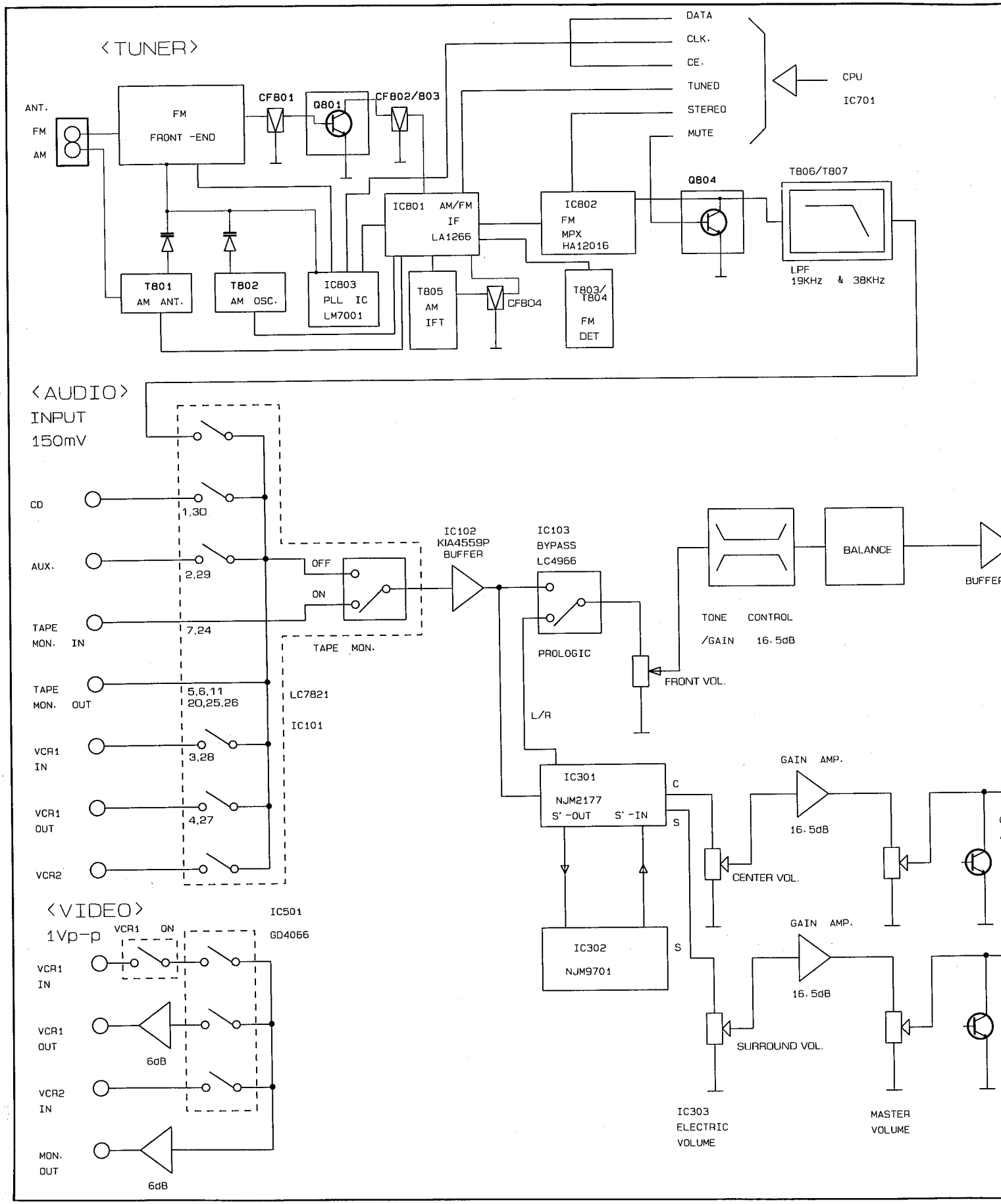
1. Inspect all lead dress to makes certain that leads are not pinched or that hardware is not lodged between the chassis and other metallic parts in the unit.
2. Be sure that any protective devices such as nonmetallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc., which were removed for servicing are properly reinstalled.
3. Be sure that no shock hazard exists; check for leakage current using Simpson Model 229 Leakage Tester, standard equipment item No. 21641, RCA Model WT540A or use alternate method as follows: Plug the power cord directly into a 230-volt AC receptacle (do not use an Isolation Transformer for this test). Using two clip leads, connects a 1500 Ohm, 10-watt resistor paralleled by a 0.15µF capacitor, in series with all exposed metal cabinet parts and a known earth ground, such as a water pipe or conduit. Use a VTVM or VOM with 1000 Ohms per volt, or higher sensitivity to measure the AC voltage drop across the resistor. (See Diagram.) Move the resistor connection to each exposed metal part having a return path to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor. (This test should be performed with the power switch in both the On and Off positions.)
   A reading of 0.35 volt RMS or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.

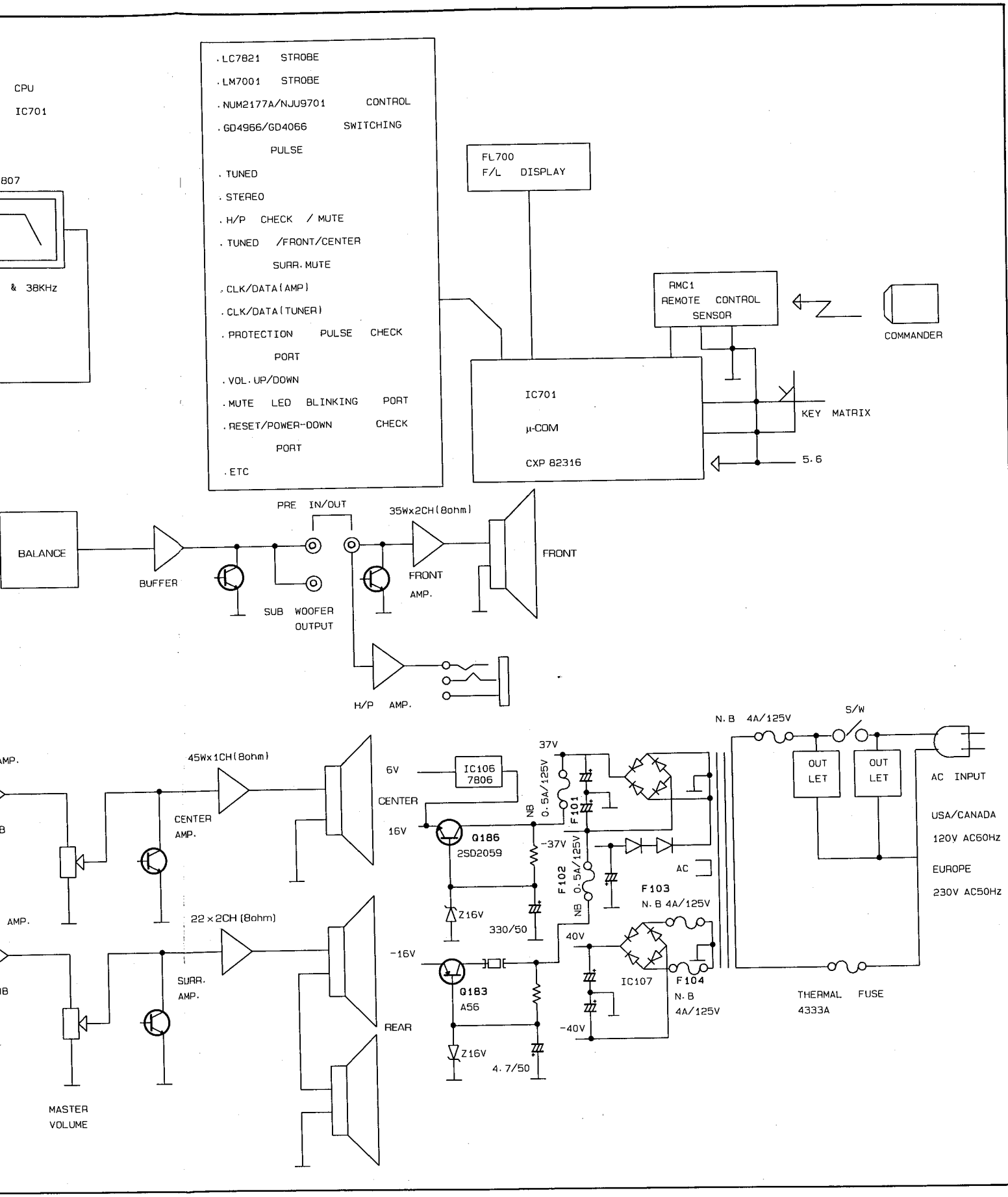

SIMPSON MODEL 229 ETC. FOR LEAKAGE TEST
TO EACH EXPOSED METAL SURFACE OF UNIT UNDER TEST
HIGH VOLTAGE OR + LEAD
GROUND LEAD
TO AC GROUND SUCH AS WATER PIPE BX CABLE CONDUIT ETC.
VTVM
AC SCALE
1.5 KΩ
10W
0.15µF
TEST PROBE
TO EXPOSED METALLIC PARTS
CONNECT TO KNOWN EARTH GROUND

BLOCK DIAGRAM

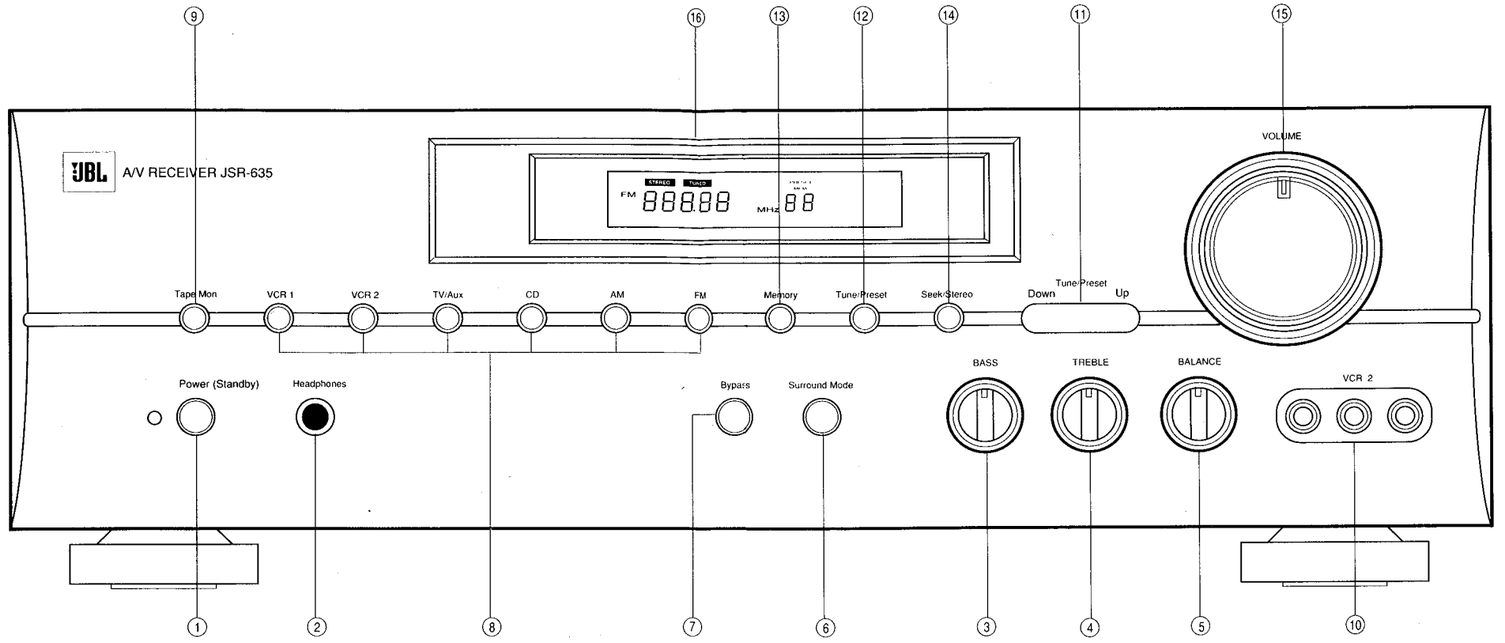


BLOCK DIAGRAM




CPU
IC701
807
& 38KHz
. LC7821 STROBE
. LM7001 STROBE
. NUM2177A/NJU9701 CONTROL
. GD4966/GD4066 SWITCHING
PULSE
. TUNED
. STEREO
. H/P CHECK / MUTE
. TUNED /FRONT/CENTER
SURR. MUTE
. CLK/DATA(AMP)
. CLK/DATA(TUNER)
. PROTECTION PULSE CHECK
PORT
. VOL. UP/DOWN
. MUTE LED BLINKING PORT
. RESET/POWER-DOWN CHECK
PORT
. ETC
FL700
F/L DISPLAY
RMC1
REMOTE CONTROL
SENSOR
COMMANDER
IC701
μ-COM
CXP 82316
KEY MATRIX
5.6
BALANCE
BUFFER
PRE IN/OUT
SUB WOOFER
OUTPUT
35Wx2CH(8ohm)
FRONT
AMP.
FRONT
H/P AMP.
45Wx1CH(8ohm)
CENTER
AMP.
22x2CH(8ohm)
SURR.
AMP.
MASTER
VOLUME
REAR
6V
IC106
7806
CENTER
16V
Q186
2SD2059
Z16V
330/50
-16V
Q183
A56
Z16V
4.7/50
37V
NB
0.5A/125V
F101
-37V
F102
0.5A/125V
NB
AC
F103
N.B 4A/125V
40V
IC107
-40V
F104
N.B
4A/125V
N.B 4A/125V
S/W
OUT
LET
OUT
LET
AC INPUT
USA/CANADA
120V AC60Hz
EUROPE
230V AC50Hz
THERMAL FUSE
4333A

CONTROLS AND FUNCTIONS



1. POWER BUTTON
Press this button to turn the power on. Press again to turn the power off. If you connect the other components to the switched outlet, it can also be used as a system power button.

2. HEADPHONE JACK
Stereo headphones can be plugged into this jack for private listening. Headphone impedance should be between 8 and 2K ohms. Best results between 200 and 400 ohms.

3. BASS CONTROL
Modifies the low frequency sound of the left and right channels as much as +/–10 dB. Se this control at a suitable position for your taste and room acoustics.

4. TREBLE CONTROL
Modifies the high frequency sound of the left and right channels by as much as +/–10 dB. Set this control at a suitable position for your taste and room acoustics.

5. BALACNE CONTROL
This control is used for balancing the relative sound volume of the left and right front channel speakers. Clockwise rotation reduces the volume from the left speaker, counterclockwise rotation reduces the volume from the right speaker.

6. SURROUND MODE SELECTOR
Press this button to select the desired surround mode. The mode is changed between DOLBY Pro Logic and DOLBY 3-STEREO.

7. BYPASS SELECTOR
Defeats all surround modes.

8. INPUT FUNCTION SELECTOR BUTTONS
Press these buttons to select the desired input source.

9. TAPE MONITOR BUTTON
Press this button to select input from a tape deck.

10. VCR2 INPUT JACKS
Connect these jacks to the corresponding output jacks of a VCR.

11. TUNE/PRESET BUTTON
When PRESET and AUTO is not lit, the TUNE/PRESET button will allow you to tune to a station manually.

12. MEMORY TUNE/PRESET BUTTON
Press the TUNE/PRESET side of this button to light up the preset mode, then use the up/down buttons momentarily to scan the preset station frequencies. The receiver stops at each preset location from 1-30 that has been entered in memory. Hold the button down to skip through the presets quickly. In the TUNE mode press these buttons to change selected frequencies.

13. MEMORY BUTTON
Use this button to store an AM or FM frequency. Press this button and select one of 30 preset locations to store the frequency with the TUNE/PRESET button while the MEMORY indicator blinks, press MEMORY again to store preset station.

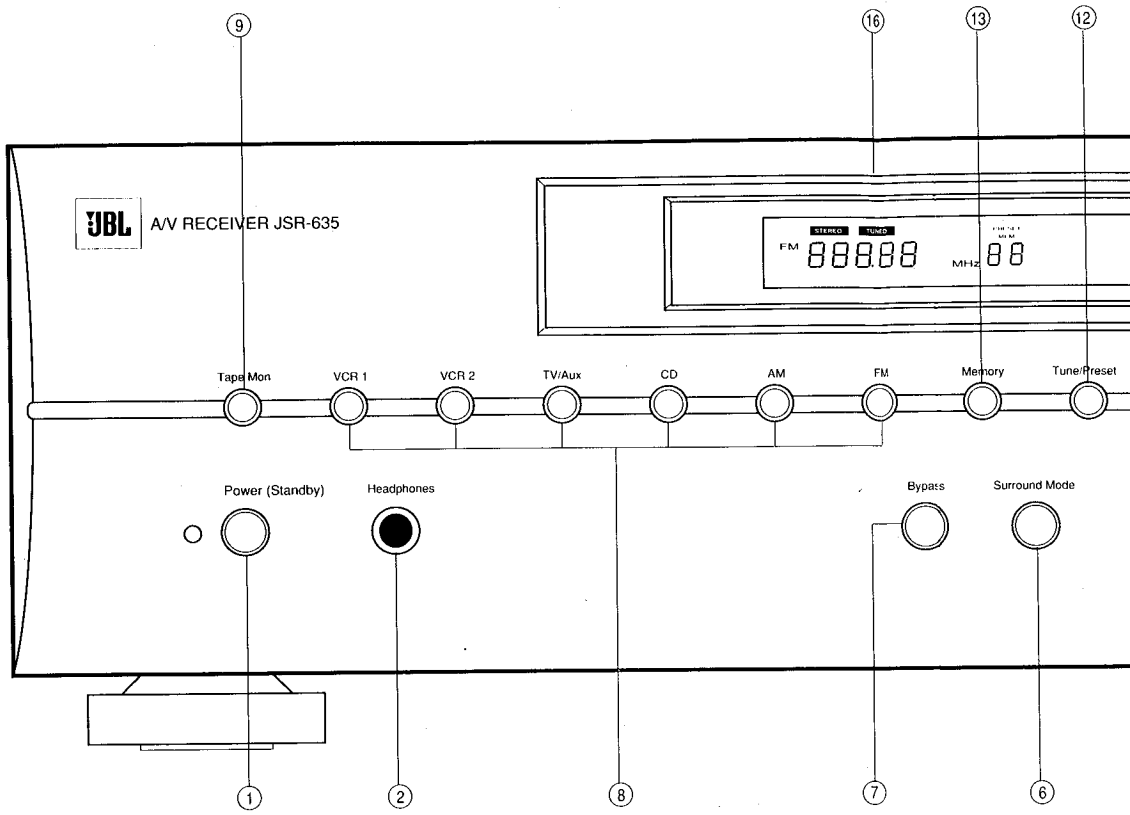
Note : *When you store a frequency in a memory location that already contains a frequency, you replace the previous frequency. If your receiver is disconnected from AC power for more than about 2 weeks, it loses all stored frequencies.*

14. SEEK STEREO BUTTON
Press this button, "Auto" will illuminate in the display. Then press the TUNE/PRESET button. The tuner will automatically seek out stations in your area that have enough signal strength to be listenable. The tuner will stop on stations until the SEEK STEREO button is pressed again.

15. VOLUME CONTROL
Turn the VOLUME clockwise to increase the volume and counterclockwise to decrease it. The volume of the front, center and rear channels is changed at the same time.

16. DISPLAY WINDOW
This window shows the state of operation for easier control of the receiver. It also contains the IR Remote Sensor.

CONTROLS AND FUNCTIONS



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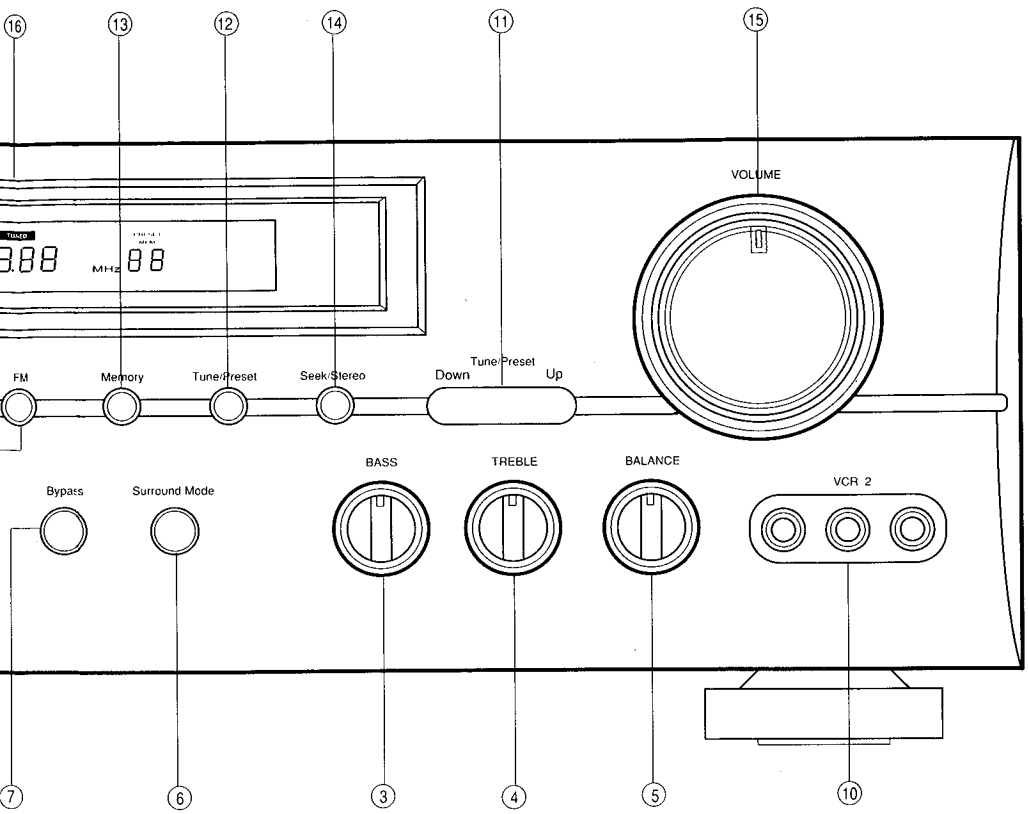

PASS SELECTOR
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16. DISPLAY WINDOW
This window shows the state of operation for easier control of the receiver. It also contains the IR Remote Sensor.

DISASSEMBLY PROCEDURES

REFER TO PAGE 22 AND 36.

[1] COVER TOP REMOVAL

Remove 6 screws (S80)~(S83) and (S68),(S69) and then remove the Cover Top ①.

[2] COVER BOTTOM REMOVAL

Remove 7 screws (S2),(S3),(S4),(S29),(S30),(S32),(S33),(S35) (S39) and then remove the Cover Bottom ②.

[3] FRONT PANEL ASSEMBLY REMOVAL

1. Remove the Cover Top①, referring to the previous step [1].
2. Disconnect (CNT113, CNT114, CNT116 and CNT111) from the Main P.C.Board (PCB1).
3. Remove the Card Cable from wafer (CNT107) on the Main P.C.Board (PCB1).
4. Disconnect (CNT122) from the Outlet P.C.Board (PCB6).
5. Disconnect (CNT105-1) from the Front P.C.Board (PCB3).
6. Remove a screw (S28) from the Frame Right ⑤ to release lug wire.
7. Remove 8 screws (S1)~(S8) and then remove the Front Panel Assembly (AA).

[4] VOLUME P.C.BOARD (PCB4) REMOVAL

1. Remove the Cover Top ①, referring to the previous step [1].
2. Remove the Front Panel Assembly (AA), referring to the previous step [3].
3. Dissconnect (CNT700 and CNT701-1) from the Volume P.C.Board (PCB4).
4. Pull out the Volume knob (39) with the LED P.C.Board (PCB5).
5. Remove the Hex Nut from the volume-motor and then remove the Volume P.C.Board (PCB4).

[5] FRONT P.C.BOARD (PCB3) REMOVAL

1. Remove the Cover Top ①, referring to the previous step [1].
2. Remove the Front Panel Assembly (AA), referring to the previous step [2].
3. Disconnect (CNT702-1) from the Volume P.C.Board (PCB4).
4. Remove 9 screws (S16)~(S24) and then remove the Front P.C.Board (PCB3).

[6] TONE & VCR2 P.C.BOARD (PCB2) REMOVAL

1. Remove the Cover Top ①, referring to the previous step [1].
2. Remove the Front Panel Assembly (AA), referring to the previous step [2].
3. Pull the Bass, Treble, Bal ance knobs (40).
4. Remove the Hex Nut from the variable resistors (16) and (17).
5. Remove 3 screws (S11) to (S13) and then remove the Tone & VCR2 P.C.Board (PCB2).

[7] HEADPHONE P.C.BOARD (PCB7) REMOVAL

1. Remove the Cover Top ①, referring to the previous step [1].
2. Remove the Front Panel Assembly (AA), referring to the previous step [2].
3. Remove 3 screws (S14),(S15),(S103) and then remove the Headphone P.C.Board (PCB7).

[8] TUNER P.C.BOARD (PCB12) REMOVAL

1. Remove the Cover Top ①, referring to the previous step [1].
2. Remove 3 screws (S47),(S49),(S77) and then remove the Tuner P.C.Board (PCB12).

[9] SURROUND P.C.BOARD (PCB9) REMOVAL

1. Remove the Cover Top ①, referring to the previous step [1].
2. Remove 2 screws (S48),(S50),and then remove the Surround P.C.Board (PCB9).

[10] VIDEO P.C.BOARD (PCB10) REMOVAL

1. Remove the Cover Top ①, referring to the previous step [1].
2. Remove 2 screws (S52),(S65), and then remove the Video P.C.Board (PCB10).

[11] CENTER SPEAKER P.C.BOARD (PCB11) REMOVAL

1. Remove the Cover Top ①, referring to the previous step [1].
2. Disconnect (CNT117-1) from the Center Speaker P.C.Board (PCB11).
3. Remove 2 screws (S53),(S66), and then remove the Center Speaker P.C.Board (PCB11).

[12] SURROUND AMP & REAR SPEAKER P.C.BOARD (PCB8 & PCB13) REMOVAL

1. Remove the Cover Top ①, referring to the previous step [1].
2. Disconnect (CNT117-1) from the Center Speaker P.C.Board (PCB11).
3. Unsolder all leads of (Q414, Q410, Q413, Q427, Q424 and Q428) from copper track on the Surround AMP P.C.Board (PCB 8).
4. Remove 3 screws (S74), (S54), (S55) and then remove the Surround AMP & Rear Speaker P.C.Board (PCB8 & PCB13).

[13] OUTLET P.C.BOARD (PCB6) REMOVAL

1. Remove the Cover Top ①, referring to the previous step [1].
2. Remove the Cord AC ⑨.
3. Disconnect (CNT101-1 and CNT122) from the Outlet P.C.Board (PCB6).
4. Remove 4 screws (S60), (S61), (S78), (S79) and then remove the Outlet P.C.Board (PCB6).

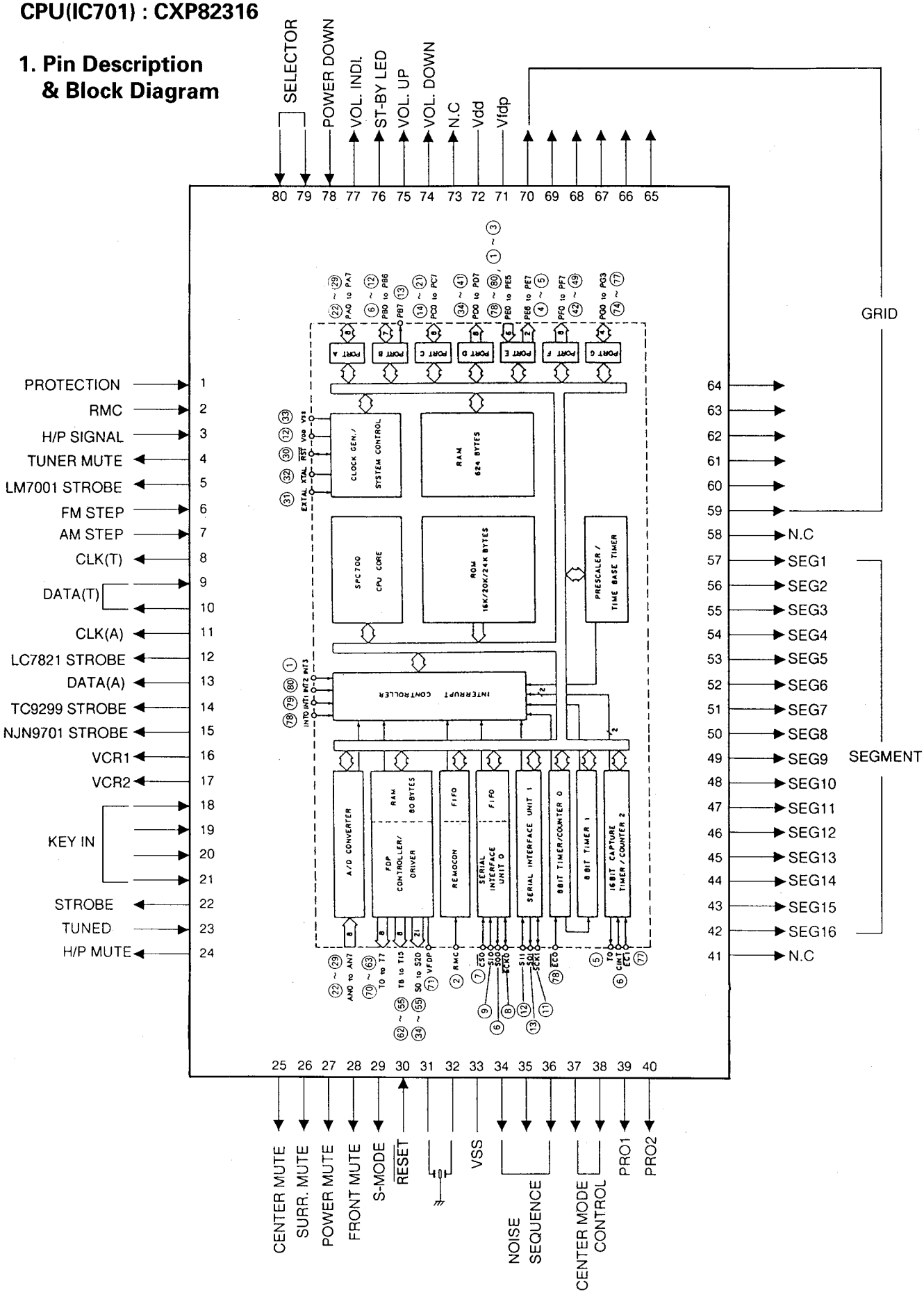
[14] MAIN P.C.BOARD (PCB1) REMOVAL

1. Remove the Cover Top ①, referring to the previous step [1].
2. Do steps [2], [3], [8], [9], [10], [12].
3. Disconnect (CNT102, CNT103 and CNT104) from the Main P.C.Board (PCB1).
4. Unsolder all leads of (Q216L/R. Q211L/R, Q215L/R, Q186, IC105, P201) from copper track on the Main P.C.Board (PCB1)
5. Remove 8 screws (S44), (S46), (S51), (S67), (S75), (S76), (S71), (S74) and then remove the Main P.C.Board (PCB1).

CIRCUIT DESCRIPTION

CPU(IC701) : CXP82316

1. Pin Description & Block Diagram



2. Input and Output Terminal Functions

<table>
<tr><th>Pin. No.</th><th>Symbol</th><th>Description</th></tr>
<tr><td>1</td><td>PROTECTION</td><td>Input for protection signal.
If it is low, all channel mute signal level is turned to high. Except for first 3 second it doesn't check protection.</td></tr>
<tr><td>2</td><td>RMC</td><td>Input for remote control signal.("L-active")</td></tr>
<tr><td>3</td><td>H/P SIGNAL</td><td>Input for headphone signal.</td></tr>
<tr><td>4</td><td>TUNER MUTE</td><td>Output for tuner mute.
Output high under the following conditions.
1. When power is turned on or off.
2. When tuner band is changed.
3. When tuner up or down button is pressed.
4. When preset button is pressed.
5. When preset number displayed changes during memory scan.
6. When the protection terminal's level is low.
7. When "-∞ mute signal" is received from the commander.</td></tr>
<tr><td>5</td><td>LM7001 STROBE</td><td>Output to enable IC LM7001.</td></tr>
<tr><td>6～7</td><td>STEP</td><td>Input to select step.
<table><tr><td>BAND</td><td>STEP</td><td>6</td><td>7</td></tr><tr><td>FM</td><td>50 K</td><td>L</td><td>H</td></tr><tr><td>AM</td><td>10 K</td><td>L</td><td>H</td></tr><tr><td>FM</td><td>50 K</td><td>L</td><td>L</td></tr><tr><td>AM</td><td>9 K</td><td>L</td><td>L</td></tr></table></td></tr>
<tr><td>8,10</td><td>CLK(T),DATA(T)</td><td>Output, clock and data signal to IC LM7001.</td></tr>
<tr><td>11,13</td><td>CLK(A),DATA(A)</td><td>Output, clock and data signal to ICs LC7821, NJU9701 and TC9299.</td></tr>
<tr><td>12</td><td>LC7821 STROBE</td><td>Output to enable IC LC7821.</td></tr>
<tr><td>14</td><td>TC9299 STROBE</td><td>Output to enable IC TC9299.</td></tr>
<tr><td>15</td><td>NJN9701 STROBE</td><td>Output to enable IC NJN9701.</td></tr>
<tr><td>16, 17</td><td>VCR1/VCR2</td><td>Output to select the video signal of VCR1 or VCR2.
Output data for each mode is as follows.
<table><tr><td>MODE</td><td>18</td><td>19</td></tr><tr><td>VCR1</td><td>H</td><td>L</td></tr><tr><td>VCR2</td><td>L</td><td>H</td></tr><tr><td>ELSE</td><td>△</td><td>△</td></tr></table>△;keeping last state.</td></tr>
<tr><td>18～21</td><td>KEY INPUT</td><td>Input data of K_1 - K_4 for key scan.</td></tr>
<tr><td>22</td><td>STEREO</td><td>When receiving low level, it turn on the stereo flag of FL.</td></tr>
<tr><td>23</td><td>TUNED</td><td>Input for station detector signal in searching turning.
Stops searching up or down when stops station detector reached a certain level.</td></tr>
<tr><td>24</td><td>H/P MUTE</td><td>Output for headphone mute.
Output low level under the following conditions.
1. When power is turned on or off.
2. When headphone plug is removed from headphone jack.</td></tr>
<tr><td>25</td><td>CENTER MUTE</td><td>Output for center mute.
Output low level under the following conditions.
1. When power is turned on or off.
2. When center mode is turned on or off.
3. When center mode is switched.
4. When test tone mode is switched on, or when output is not directed to center.</td></tr>
</table>

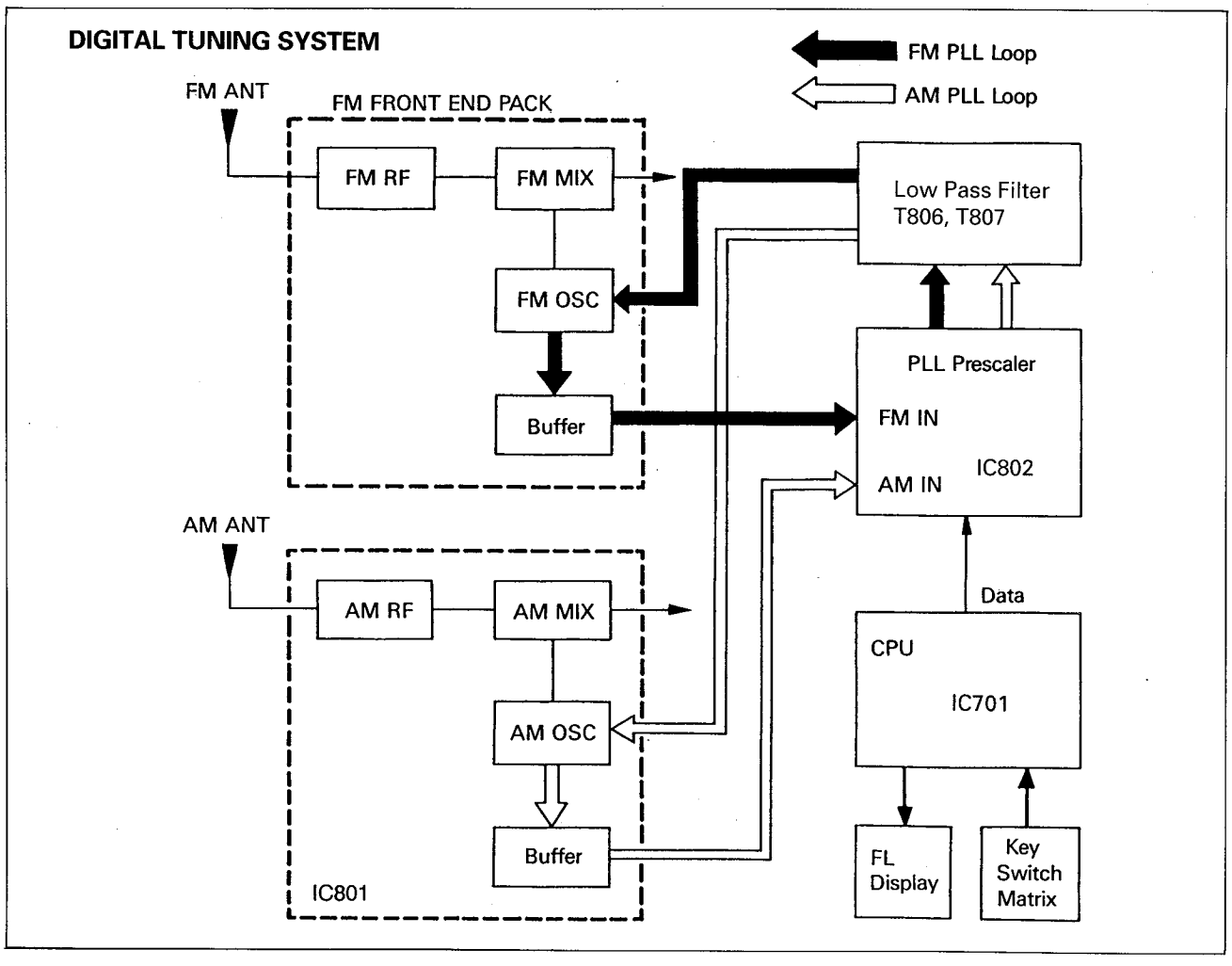
<table>
<tr><th>Pin. No.</th><th>Symbol</th><th>Description</th></tr>
<tr><td>26</td><td>SURR, MUTE</td><td>Output for surround mute.
Output low level under the following conditions.
1. When power is turned on or off.
2. When surround mode is turned on or off.(Keeping low level in surr. off.)
3. When test tone mode is changed, or when output is not directed to surround.
4. When delay time is switched.
5. When the protection terminal's level is low.
6. When "-∞ mute signal" is received from the commander.
7. When headphone plug is inserted.</td></tr>
<tr><td>27</td><td>POWER MUTE</td><td>Output for all amp. mute.
Output low level under the following conditions.
1. When power is turned on or off.
2. When the protection terminal's level is low.</td></tr>
<tr><td>28</td><td>FRONT MUTE</td><td>Output for main mute.
Output low level under the following conditions.
1. When power is turned on or off.
2. When function is changed.
3. When mono or stereo is changed.
4. When the protection terminal's level is low.
5. When "-∞ mute signal " is received from the commander.
6. When headphone plug is inserted.</td></tr>
<tr><td>29</td><td>S-MODE</td><td>Output voltage is as follows to control surround mode.
Prologic : 5V, 3-Stereo : 2.5V, bypass : 0V</td></tr>
<tr><td>30</td><td>RESET</td><td>Input to reset μ-COM.</td></tr>
<tr><td>31,32</td><td>EXTAL, XTAL</td><td>Input and output pin for connecting a crystal oscillator.</td></tr>
<tr><td>33</td><td>VSS</td><td>Provides the ground potential.</td></tr>
<tr><td>34～36</td><td>NOISE SEQUENCE</td><td>Output signal to select output channal in testing tone.
Output signal for 2 second per each channal in order L,C,R,S.
<table>
<tr><th>MODE / PIN No.</th><th>L</th><th>C</th><th>R</th><th>S</th><th>TEST TONE OFF</th></tr>
<tr><td>34</td><td>L</td><td>L</td><td>L</td><td>L</td><td>H</td></tr>
<tr><td>35</td><td>L</td><td>L</td><td>H</td><td>H</td><td>△</td></tr>
<tr><td>36</td><td>L</td><td>H</td><td>L</td><td>H</td><td>△</td></tr>
</table>
△ : Keeping last state</td></tr>
<tr><td>37, 38</td><td>CENTER MODE CONTROL</td><td>Output data to control center mode.
<table>
<tr><th>MODE / PIN No.</th><th>NOR MAL</th><th>PHAN TOM</th><th>WIDE</th></tr>
<tr><td>37</td><td>H</td><td>L</td><td>L</td></tr>
<tr><td>38</td><td>L</td><td>L</td><td>H</td></tr>
</table></td></tr>
<tr><td>39, 40</td><td>PRO1, PRO2</td><td>Input for protection signal.</td></tr>
<tr><td>41</td><td>NC</td><td>Not used.</td></tr>
<tr><td>42～57</td><td>S16-S1</td><td>Output for segment.</td></tr>
<tr><td>58</td><td>NC</td><td>Not used.</td></tr>
<tr><td>59～70</td><td>G1-G12</td><td>Output for grid.</td></tr>
<tr><td>71</td><td>Vfdp</td><td>Power supply of the FL controller.</td></tr>
<tr><td>72</td><td>Vdd</td><td>Power supply.</td></tr>
<tr><td>73</td><td>NC</td><td>Not used.</td></tr>
<tr><td>74, 75</td><td>VOL. UP/DOWN</td><td>Output signal to turn up or down volume moter.</td></tr>
</table>

Pin. No.	Symbol	Description
76	ST-BY LED	Output voltage to control ST-BY LED is as follows. When power is turned on by power s/w or remocon, it is high level. Else, it is low level. (Keeping last level)
77	VOL. INDI.	Output signal to turn on or off the LED which is used master volume indicator. It is high level in turning on and low level in turning off.
78	PD	Input for power down. (At "L", it is active)
79, 80	SELECTOR	Input signal is as follows to select one of three sets.

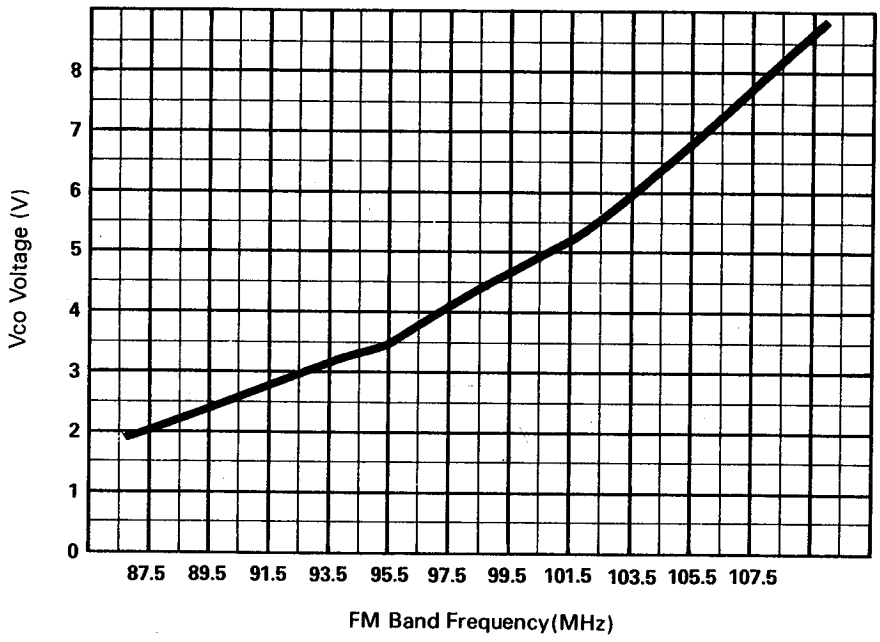
3. Key Matrix

PIN NO.	51	52	53	54
18	SURR1. BYPASS	SURR. MODE	SEEK STEREO	PRESET UP
19	TAPE MON.	VCR1	TUNER ▼ PRESET ▲	PRESET DOWN
20	TV/VCR2	CD	MEMORY	
21	AUX	FM	AM	

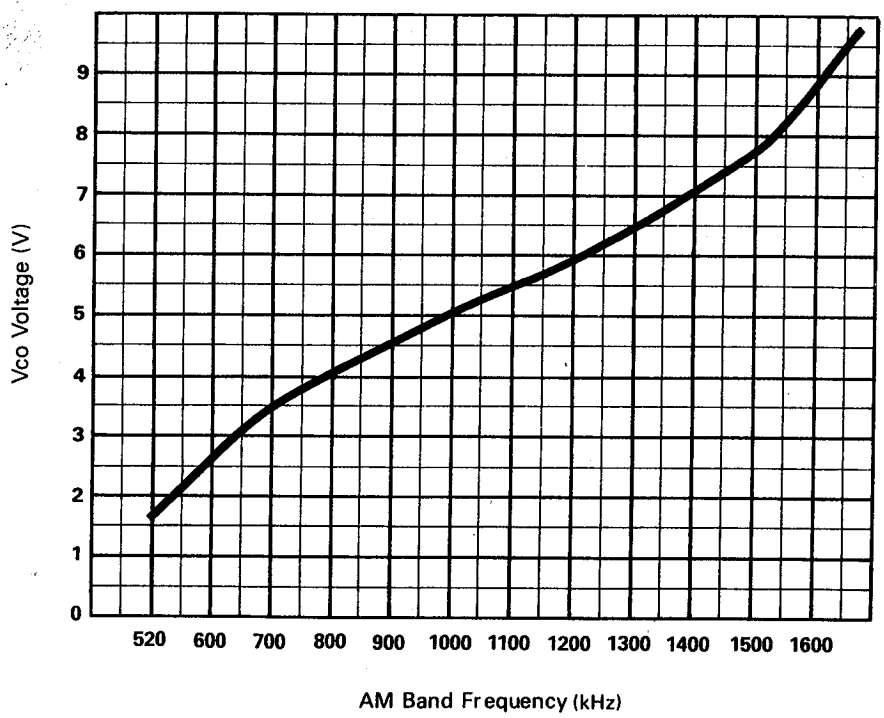
4. Digital Tuning System Description



Vco vs. FM Band Frequency Curve



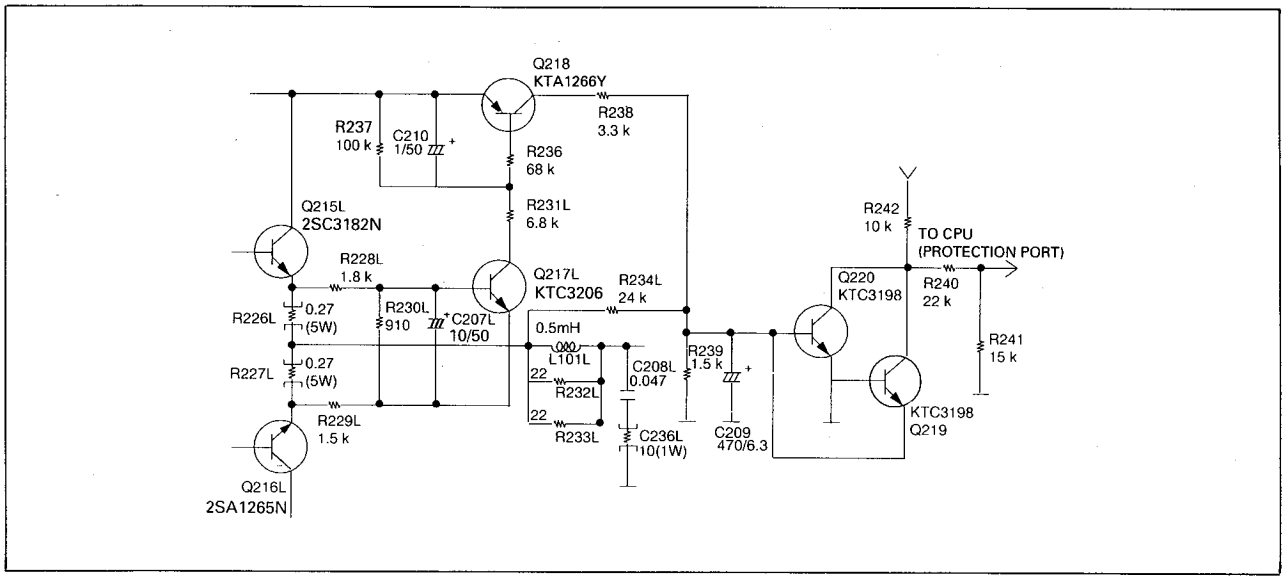
Vco vs. AM Band Frequency Curve



5. Protection Circuits

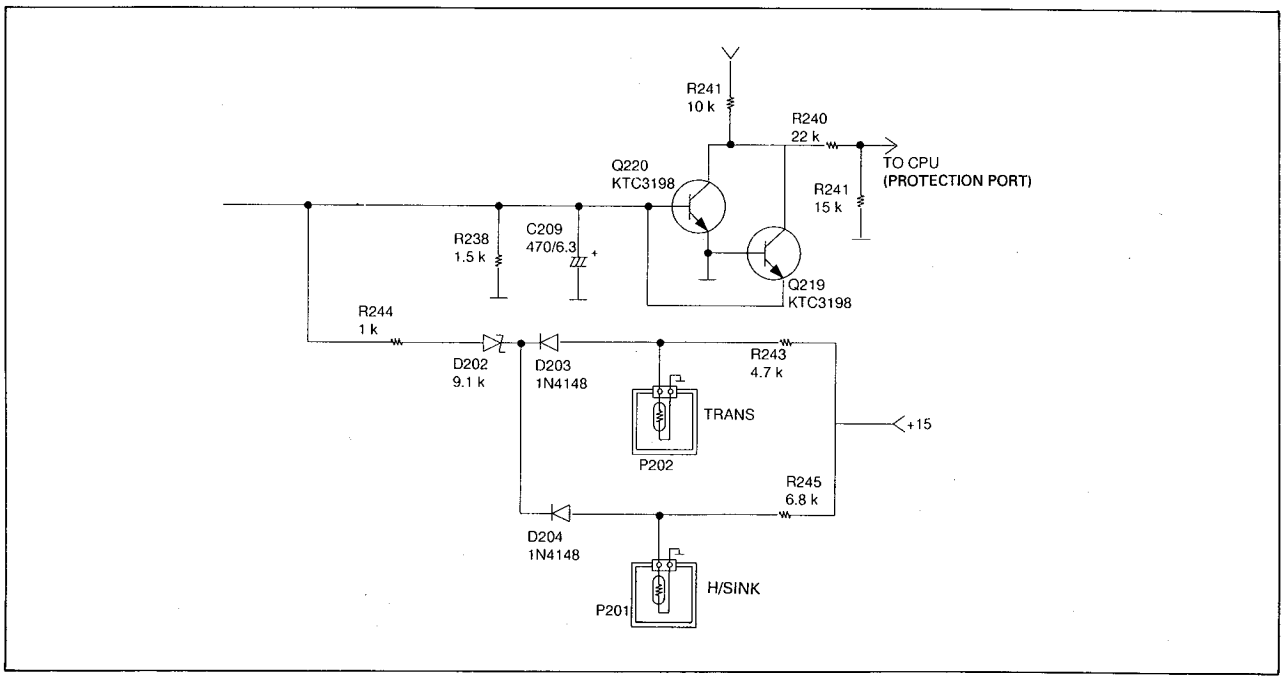
SPEAKER PROTECTION CIRCUIT

The CPU protects both this unit and the speakers when an abnormally high current flows in Q215 L/R and Q216 L/R due to excessive input drive, too low of a load impedance, or short of the speaker terminals. If current increase is excessive the voltage across R226 L/R or R227 L/R turns on Q217 L/R, then Q218 turns on Q220.
It makes the protection port of the CPU to low state.
Then the power is turned off.



THERMAL PROTECTION CIRCUIT

This receiver has a overload thermal protection circuits to guard against abnormal operation.
When the temperature of TRANS POSISTOR installed with the main transformer or H/SINK POSISTOR rises abnormally, the resistance of the posistor becomes larger and Q220 is turned on.
It makes the protection port of the CPU to low state. Then the power is turned off.



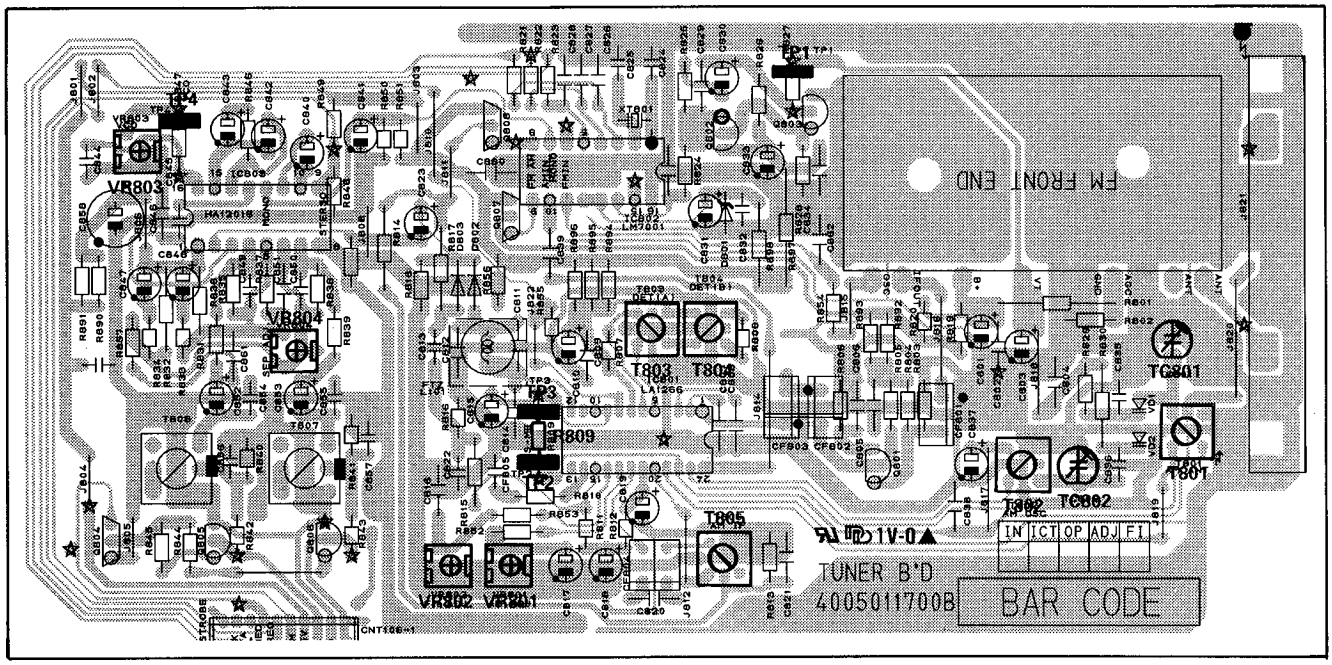
ALIGNMENT PROCEDURES

1. Equipment Required

- AM Standard Signal Generator (AM SSG)
- Oscilloscope
- AC Voltmeter
- FM Standard Signal Generator (FM SSG)
- Stereo Modulator
- Audio Generator
- Distortion Meter
- DC Voltmeter
- Frequency Counter

Note : Disconnect external FM antenna prior to alignment.

2. Alignment and Test Points (PCB14)



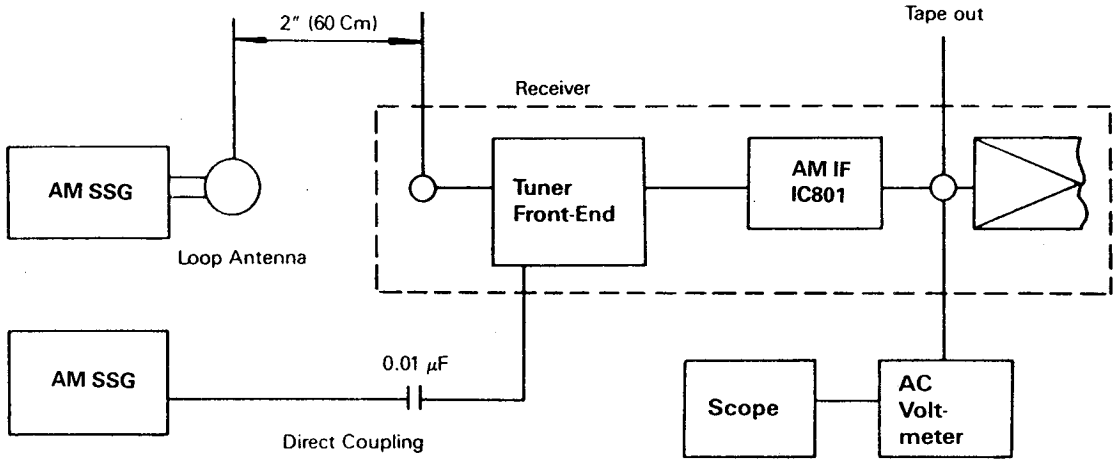
3. AM IF and RF Alignment

Preparation

1. Output of Signal Generator should not be higher than necessary to obtain an optimum output reading.
2. Signal Generator Modulation : 30%
3. Switch : Press to AM.

Step	Signal Generator Frequency	Receiver Frequency on the Display	Equipment Connection	Adjustment Point	Adjust for
1	999 kHz (400 Hz, Mod.)	522 kHz	DC Voltmeter TP1	T802	1.2 V reading
		1611 kHz	DC Voltmeter TP1	TC802	8.5 V reading
2	594 kHz (400 Hz, Mod.)	594 kHz	AC voltmeter to TAPE OUT jack.	T801 (ANT Coil)	Maximum reading
3	1404 kHz (400 Hz, Mod.)	1404 kHz	AC voltmeter to TAPE OUT jack.	TC801 (ANT Trimmer)	Maximum reading

4	999 kHz (400 Hz, Mod.)	999 kHz	AC voltmeter to TAPE OUT jack.	T805 (IFT)	Maximum reading
5	999 kHz (400 Hz, Mod.)	999 kHz	AC voltmeter to TAPE OUT jack.	VR801	FL display 'TUNED' Indication on receiver with AM SSG Output level of 800 μV/m



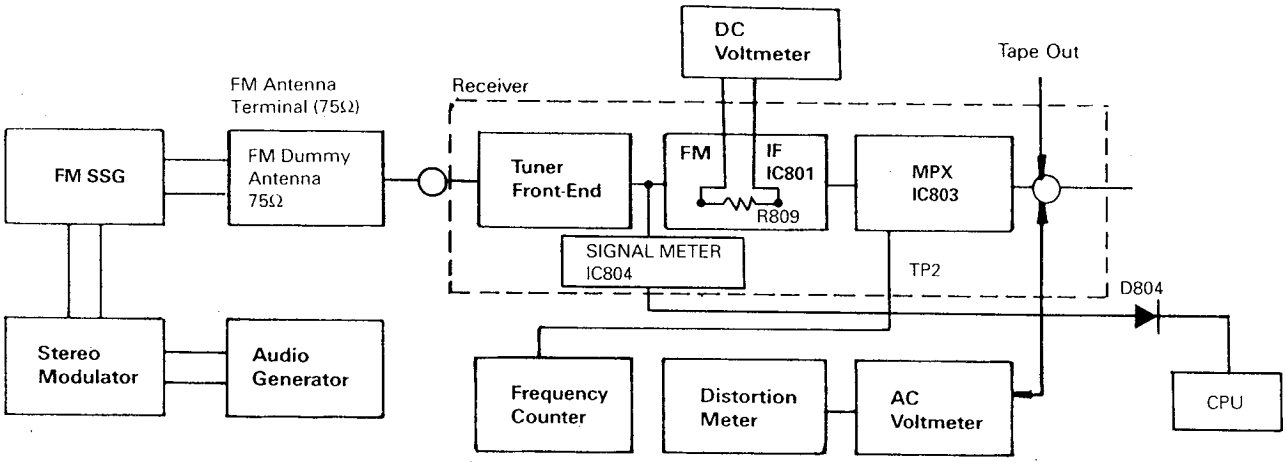
AM Alignment Connection

4. FM IF Alignment

Preparation

1. Signal Generator output should be no higher than necessary to obtain an optimum output reading.
2. Switch Press to FM.
3. Signal generator deviation : 40 kHz.

Step	Signal Generator Frequency	Receiver Frequency Display	Equipment Connection	Adjustment Point	Adjust for
1	98.0 MHz (1 kHz, Mod.)	98.0 MHz	Distortion meter to TAPE OUT jack	T804	Minimum distortion
2	98.0 MHz (1 kHz, Mod.)	98.0 MHz	Same as Step 1	VR802	FL display 'TUNED' Indication on receiver with FM SSG output level of 10 μV/m
3	98.0 MHz (1 kHz, Mod.)	98.0 MHz	DC Volt meter to R809 between TP2 and TP3.	T803	Zero reading on DC volt meter.



FM RF IF and MPX Alignment Connection

5. FM and MPX Alignment

Preparation

1. Switch : Press to FM.
2. Tuner for 98 MHz on band.
3. Signal Generator output level : 1000 μV.
4. Deviation : 40 kHz, at 100% modulation of composite signal.
5. Connect Signal Generator to FM antenna terminal through FM dummy antenna (75Ω).

Step	19 kHz Modulation Level	Signal Generator Frequency Setting	Equipment Connection	Adjustment Point	Adjust for
1	Pilot off	Carrier only	Frequency counter connect to TP4 (HOT) of PCB and ground	VR803	76 kHz
2	8% Mod.	Composite to channel 1kHz R	AC voltmeter to TAPE OUT jack of R channel	–	Adjust for about 450mV of audio output
3	8% Mod.	Composite to channel 1 kHz L	AC voltmeter to TAPE OUT jack of R channel	VR804	AC voltmeter reading should be at least 40 dB below.
4	8% Mod.	Composite to channel 1 kHz R	AC voltmeter to TAPE OUT jack of L channel	VR804	Same as Step 3.
5	8% Mod.	Composite to channel 1 kHz L or R	AC voltmeter to TAPE OUT jack Lor R channel	VR805	FL display 'SIG 60 dB' indication on receiver with FM SSG output level of 1000 μV/m
If you could not obtain –40dB readings in Steps 3 and 4 (compared with Step 2), readjust VR804 until you obtain –40dB readings for both Steps 3 and 4. Nominal is –45 dB.					

TROUBLESHOOTING

Symptom	Cause and Remedy
Receiver inoperative. (FL indicator does not light.)	A) Faulty AC power cord. Replace. B) Defectve the power switch. Replace. C) Broken wire in the power transformer. Replace the power transformer. D) Blown fuse. Replace the fuse.
Fuse blows when power is turned on.	A) Defective power transformer. Replace. B) Short on the primary or secondary of the transformer circuitry. Repair the short. C) Damaged rectifier (D181 to D184) or damaged transistor (Q215L/R or Q216L/R). Replace the defective component(s). D) Short circuit in the amplifier circuit. Replace the shorted component(s) in the amplifier circuit.
Power indicator lights but no sound from both channels.	A) Defect in transistor Q215 L/R, Q216 L/R on the Main Amp Board. Replace the defective component(s).
One channel does not work when volume is at maximum with a test signal applied to the center terminal of volume control of the dead channel.	A) Defect in transistors Q215 L/R, Q216 L/R on the Main Amp Board (PCB1). Locate and correct the defect. B) Break in copper foil of printed circuit board. Repair the trace. C) Short in speaker output terminal. Repair or replace.
Speaker works normally but headphones inoperative.	A) Headphone plug does not mate with jack. Replace the jack. B) Defective resistor R728L/R. Replace.
FM inoperative	A) Defective front-end. Replace. B) Defective FM switch. Replace the switch. C) Defective transistor and ICs Q801, Q805, Q806, IC801, IC803. Replace the defective transistor(s) or IC(s). D) Defective coil T803 or T804. Replace the coil(s). E) Defective lead-in. Repair or replace the lead-in. F) Ceramic filters CF801, CF802, CF803 defective. Replace the defective ceramic filter(s). G) Defective controller circuit component. Replace.

Symptom	Cause and Remedy
Poor multiplex separation.	A) Improper adjustment. Readjust VR803 and VR804. (Refer to MPX Alignment.) B) IC803 defective. Replace. C) Variable resistors VR803 or VR804 defective. Replace the variable resistor(s).
STEREO indicator does not light.	A) Defective indicator in FL. Replace. B) Improper adjustment of VR803 of tuner board. Make readjustment. C) Defective IC803. Replace the defective component.
FM volume in sufficient.	A) If volume from both L and R channels is not loud enough : Front end section defective. Faulty IC801, Coil T803, Defective C838 of Tuner Board. If sound of one channel is not loud enough: Defective T806, T807
FM Mono has no effect.	A) Defective FM MODE switch. Replace.
AM inoperative.	A) Damaged IC801 of tuner board. Replace. B) Defective T801, T802, T805 or CF804 of Tuner Board. Replace the defective component(s). C) Resistors R829, R817 defective. Replace the defective component(s). D) Capacitors C836, C818, C813 defective. Replace the defective capacitor(s). E) Defective AM switch. Replace. F) Defective varicap diodes VD1, VD2 Replace varicap diods(s). G) Damaged AM loop antenna. Repair or replace. H) Defective controller circuit component. Replace.
Bass control has no effect	A) Variable resistor BASS defective. Replace. B) Defective R129L/R, R131L/R, C126L/R, C128L/R. Replace the defective component(s).

Symptom	Cause and Remedy
Treble control has no effect.	A) Variable resistor TREBLE defective. B) Defective R130L/R, R132L/R, C127L/R, C129L/R. Replace the defective components(s).
Auto tune inoperative. (UP/DOWN)	A) Poor contact in Up/Down key. Repair or replace. B) Defective IC701. Replace. C) Defective tuner circuit components. Replace. D) In case of FM only, improper adjustment of FM front-end. Readjust.
Manual tune inoperative. (UP/DOWN) (AM or FM)	A) Poor contact in Up/Down key. Replace. B) Defective IC701. Replace.
Memory setting inoperative.	A) Poor contact in memory keys 1-10. Replace. B) Defective IC701. Replace the defective component.
FL inoperative.	A) FL defective. Replace. B) Defective IC701. Replace C) Defective X-700. Replace.
Noisy volume control.	A) Defective volume control. Replace. B) Defective capacitors C701 or C703 Replace the defective capacitor(s).
Remote Control Unit inoperative.	A) Weak battery. Replace. B) Defective. Replace. C) Defective IC701 (Front Board). Replace.

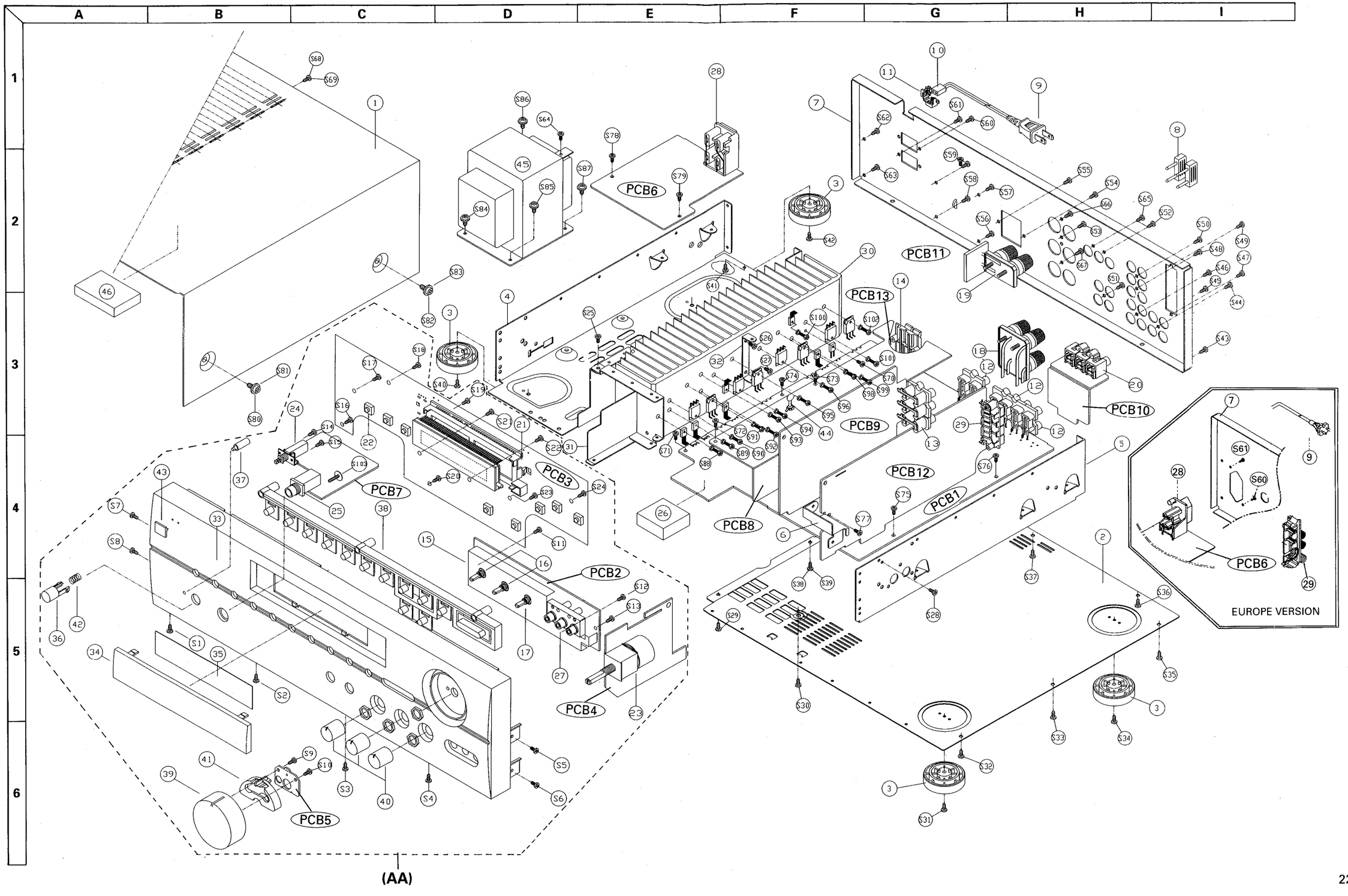
GENERAL UNIT PARTS LIST

Ref. No.	Description	Mfr. Part No.	Q'ty	Version
	CABINET & CHASSIS			
1	Cover, Top	046122029611	1	
2	Cover, Bottom	6122420410	1	
3	Foot, Hot-Stamping, Gold	046033102411	4	
4	Frame, Left	6121607640	1	
5	Frame, Right	6122633520	1	
6	Bracket, PCB Tuner	6505139810	1	
7	Chassis, Back	046102046011	1	USA/Canada
(7)	Chassis, Back	046102046022	1	Europe
8	Jumper Plug, 2P	4328204210	2	
9	⚠ Cord, AC Power	4308001410	1	USA/Canada
(9)	⚠ Cord, AC Power	4308001430	1	Europe
10	Assembly Cord, AC Power	4308009220	1	USA/Canada
(10)	Assembly Cord, AC Power	4308009510	1	Europe
11	Stopper, Cord	6518002310	1	
12	Jack RCA, 4P	4438103110	3	
13	Jack RCA, 6P	4438103210	1	
14	Terminal, Speaker Rear, 4P	4408108910	1	
15	Shield Fence	6163115910	1	
16	Volume, Bass/Treble	3208049510	2	
17	Volume, Balance	3208052010	1	
18	Terminal, Speaker Main, Screw Type, 4P	4408108610	1	
19	Terminal, Speaker Center, Screw Type, 2P	4408108710	1	
20	Jack RCA(VCR1/Monitor), 3P	4438114310	1	
21	Holder, FL	6043010210	1	
22	Switch Tact	4658004810	14	
23	Volume Motor, 50 k(A)	3228020010	1	
24	Switch Power, Push Type	4628055910	1	
25	Jack, Headphone, 9P	4438005610	1	
26	Sponge	6715018910	1	
27	Jack RCA, 3P, VCR	4438109710	1	
28	⚠ Outlet, AC	4448104810	1	USA/Canada
(28)	⚠ Outlet, AC	4448103610	1	Europe
29	Terminal, Antenna	4408108310	1	USA/Canada
(29)	Terminal, Antenna	4408108210	1	Europe
30	Heatsink, Power	7502008710	1	
31	Bracket, Heatsink	6503032310	1	
32	Bracket, PCB Main	6505139720	1	
33	Panel, Front	048501037711	1	
34	Window, Display	8553024410	1	
35	Filter, FL	048553024311	1	
36	Button, Power	048545134011	1	
37	Indicator, Power	8545134110	1	
38	Button, Function, 14key	048542008211	1	
39	Knob, Volume	048543059812	1	
40	Knob, Rotary (Bass/Treble/Balance)	048545124312	3	
41	Indicator, Volume	8555048610	1	
42	Spring Power	6555000120	1	
43	Badge, JBL	048535046711	1	
44	Clamp Wire	6528302520	1	
45	⚠ Power Transformer, 120 V, 60 Hz	2828100297	1	USA/Canada
(46)	⚠ Power Transformer, 230 V, 50 Hz	2828100497	1	Europe
46	Spacer, Sponge	6715024830	1	
	HARDWARE KIT			
S1-S64	Screw, #2BTC 3x8B	8109230083	64	
S65-S67	Screw, Ground	8155000710	3	
S68-S70	Screw, #2BTC 3x8B	8109230083	3	
S71-S79	Screw, WBTC 3x9Y	8159230083	9	
S80-S87	Screw, WSAM 4x8B	8159440083	8	
S88-S102	Screw, Heatsink (L=12)	8195000310	15	
S103	Screw Washer	8155001210	1	
	MISCELLANEOUS			
	FPC Cable, 31P, 270mm	4118631275	1	
	Assembly Posistor, 180mm	052438000280	1	
	Assembly Posistor, 200mm	052438012201	1	

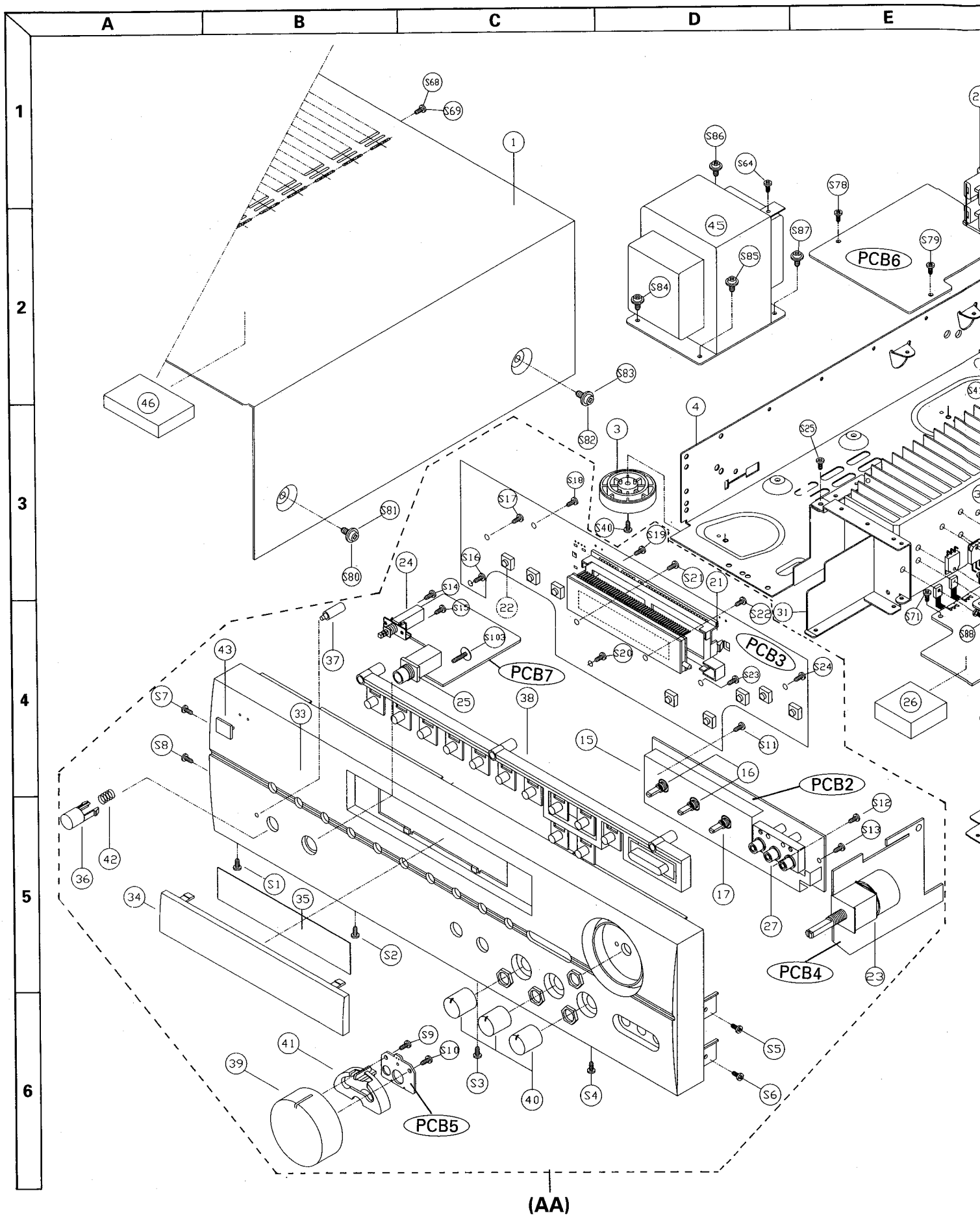
PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list are of special significance to safety. When replacing a component identified with ⚠ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

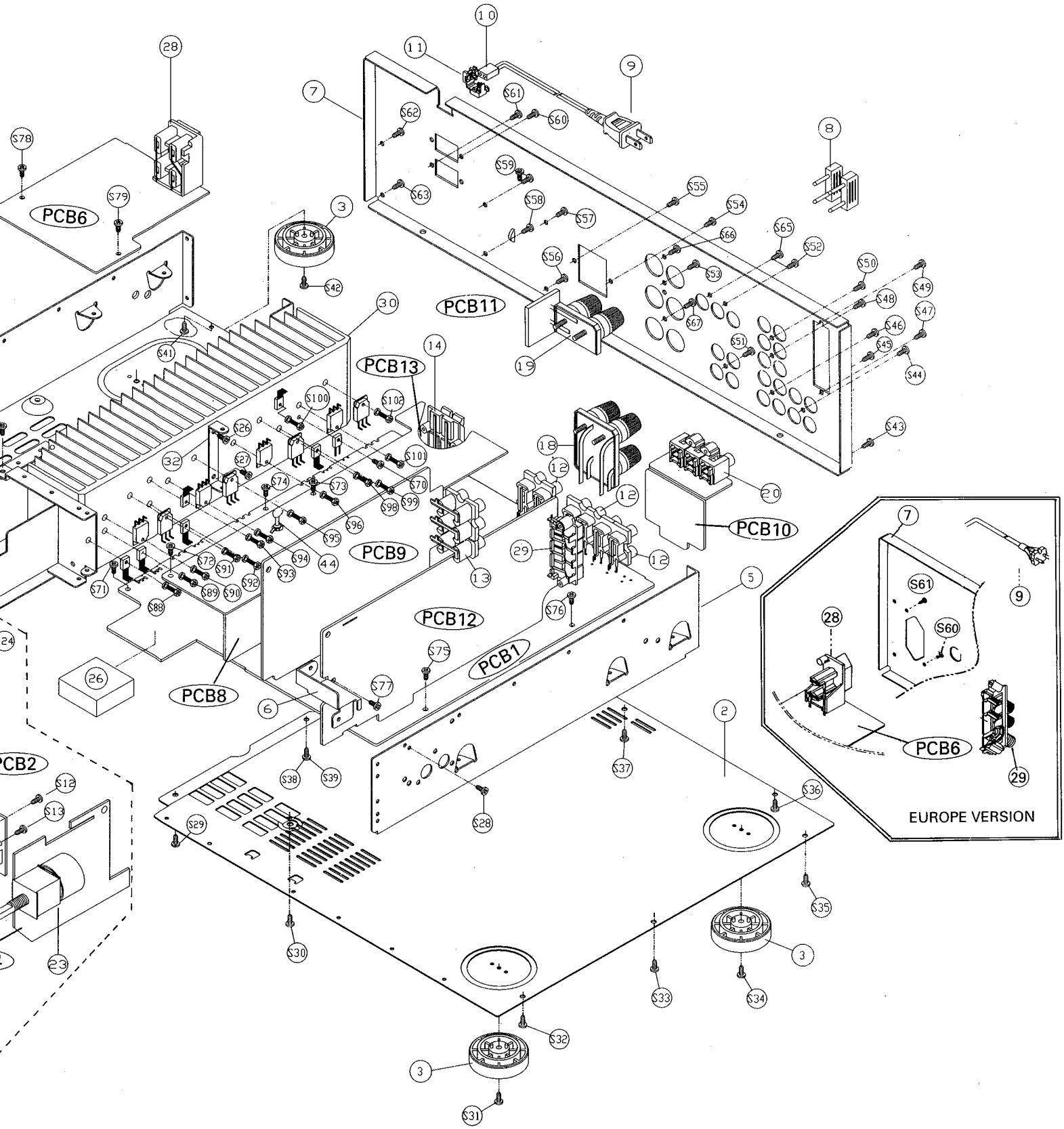
GENERAL UNIT



GENERAL UNIT

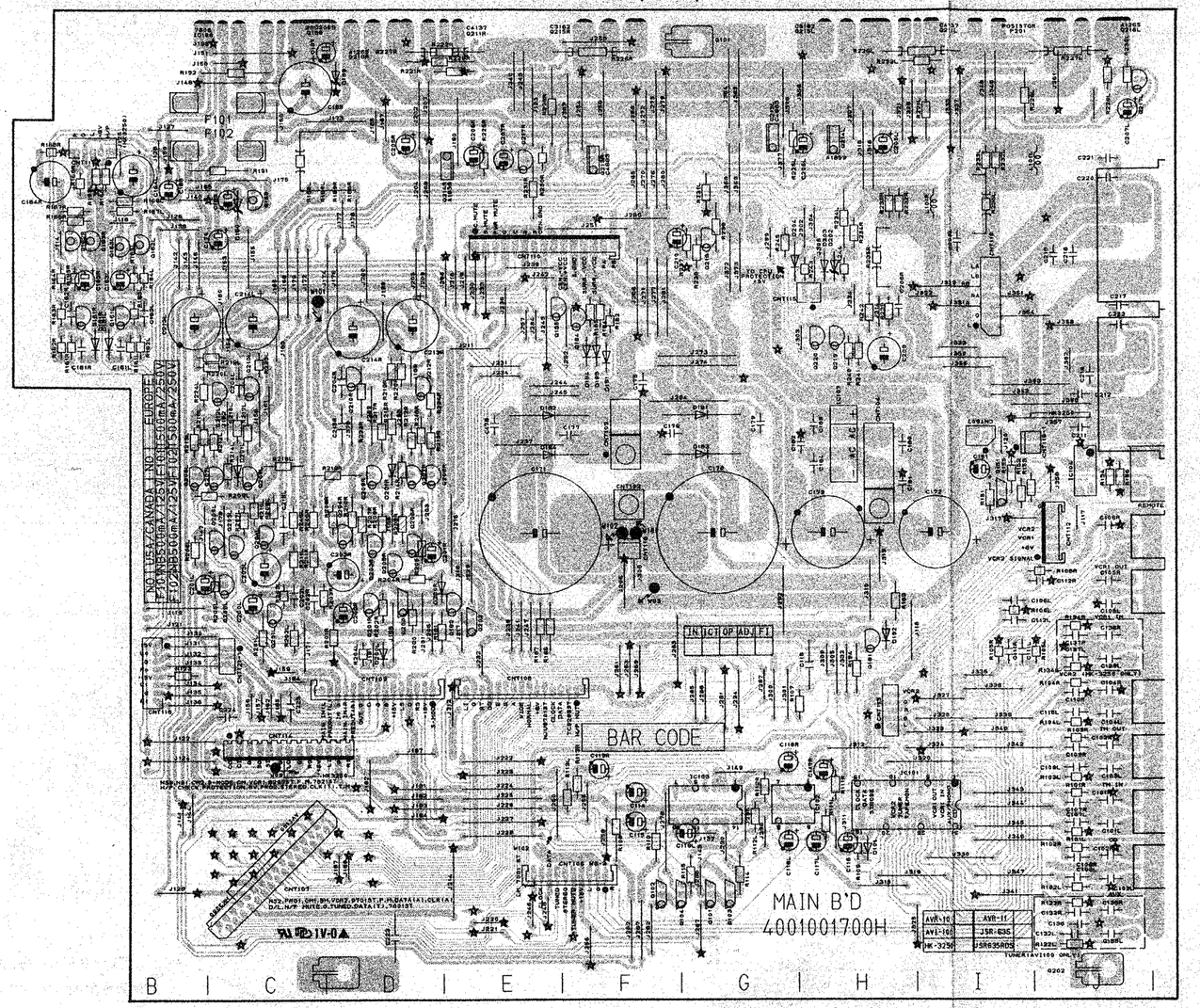


E	F	G	H	I

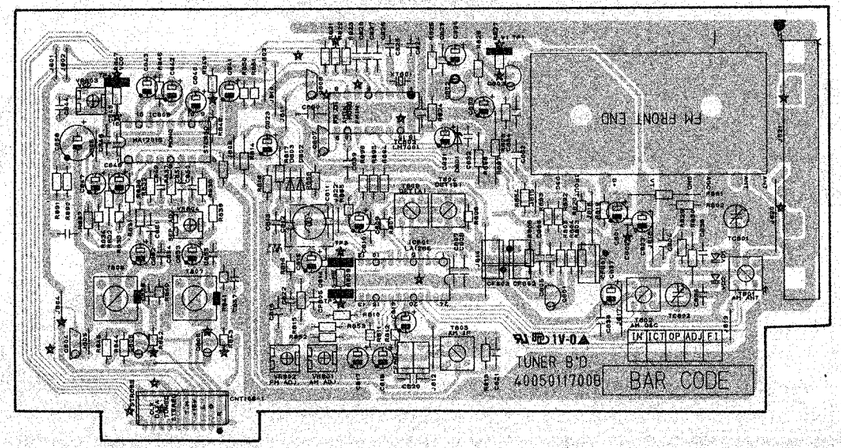

PCB6
PCB11
PCB13
PCB9
PCB10
PCB12
PCB1
PCB8
PCB2
EUROPE VERSION

PRINTED CIRCUIT BOARDS

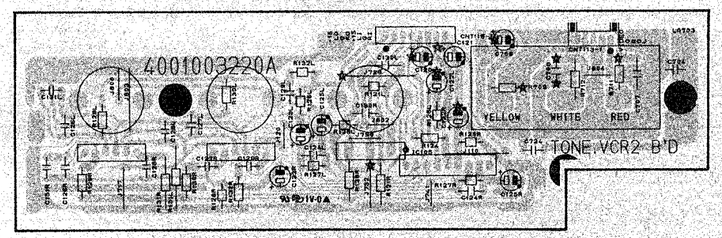
MAIN (PCB1)



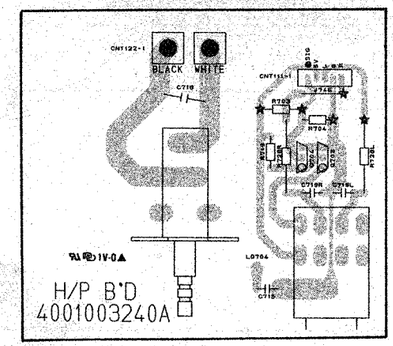
TUNER (PCB12)



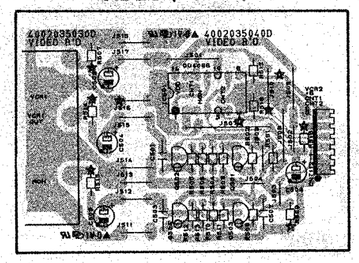
TONE (PCB2)



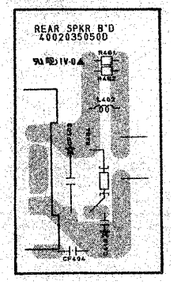
HEADPHONE (PCB7)



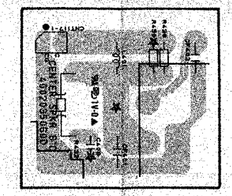
VIDEO (PCB10)



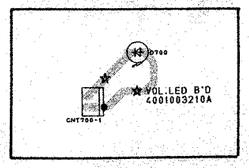
REAR SPEAKER (PCB13)



CENTER SPEAKER (PCB11)

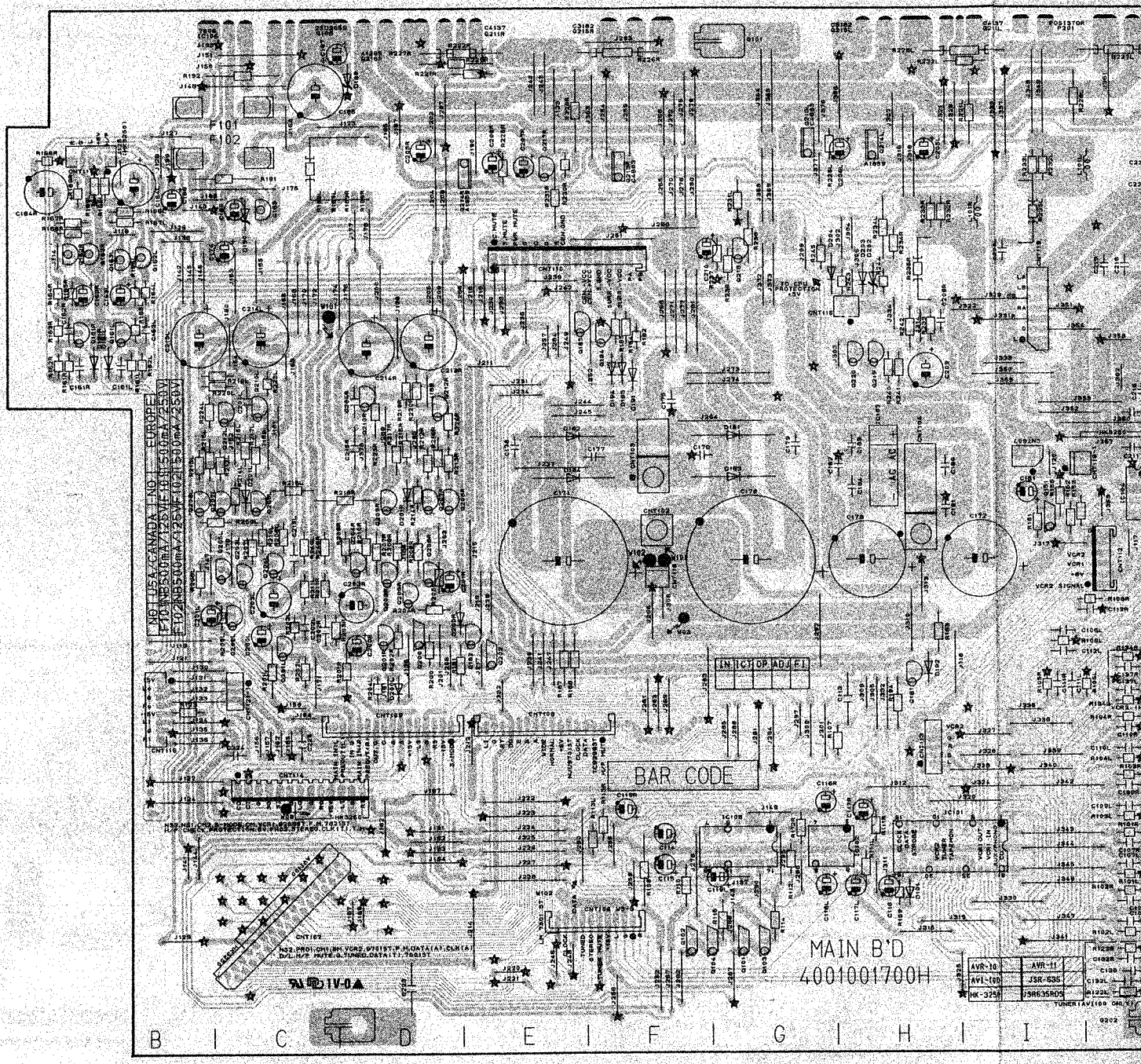


VOLUME LED (PCB5)

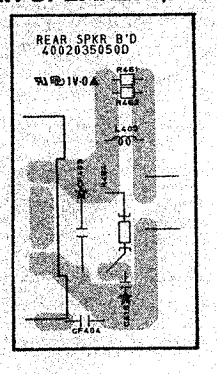


PRINTED CIRCUIT BOARDS

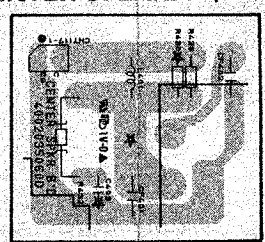
MAIN (PCB1)



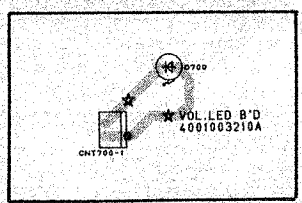
REAR SPEAKER (PCB13)

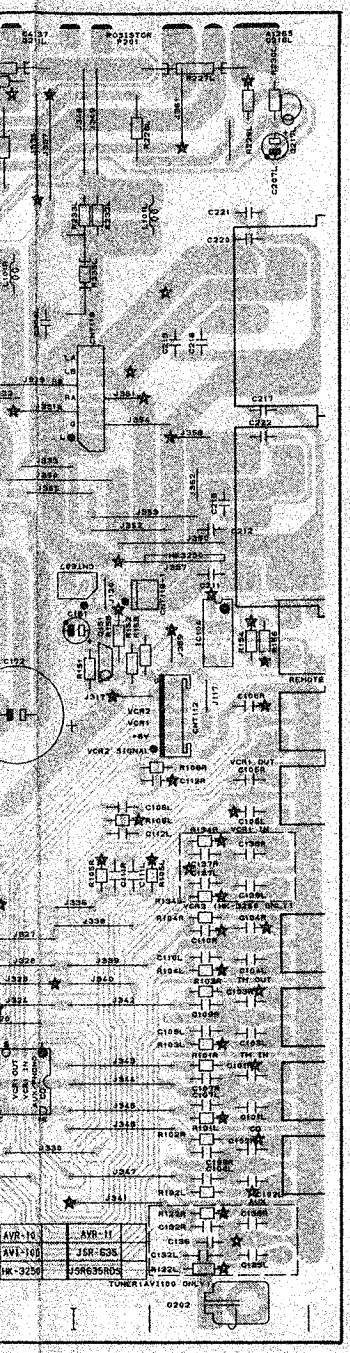


CENTER SPEAKER (PCB11)

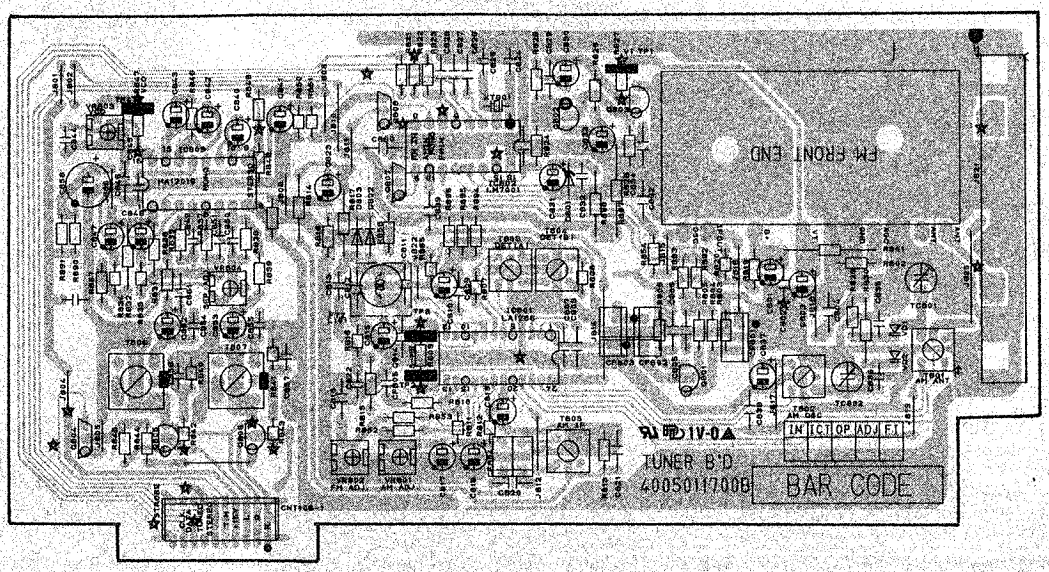


VOLUME LED (PCB5)

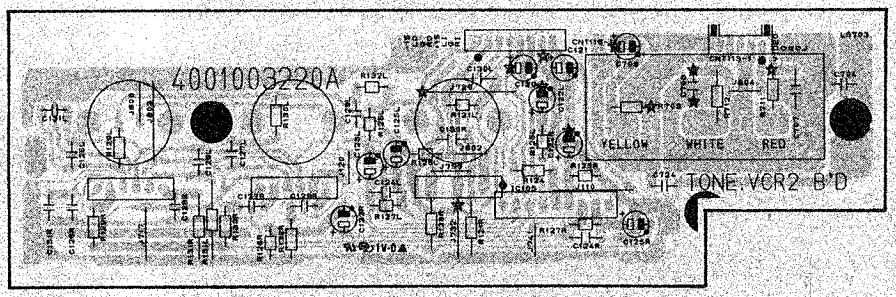




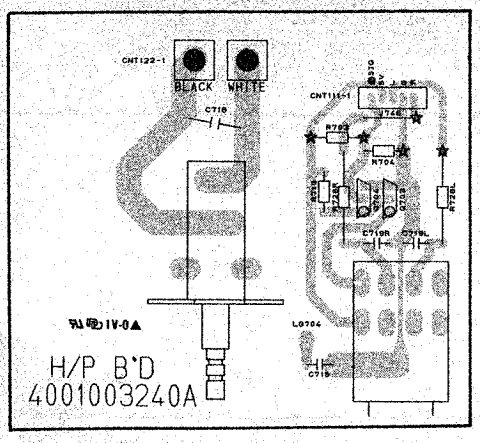
TUNER (PCB12)



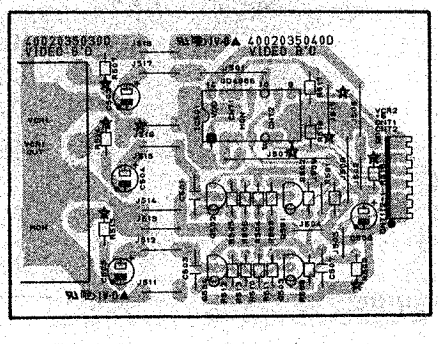
TONE (PCB2)



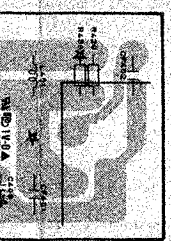
HEADPHONE (PCB7)



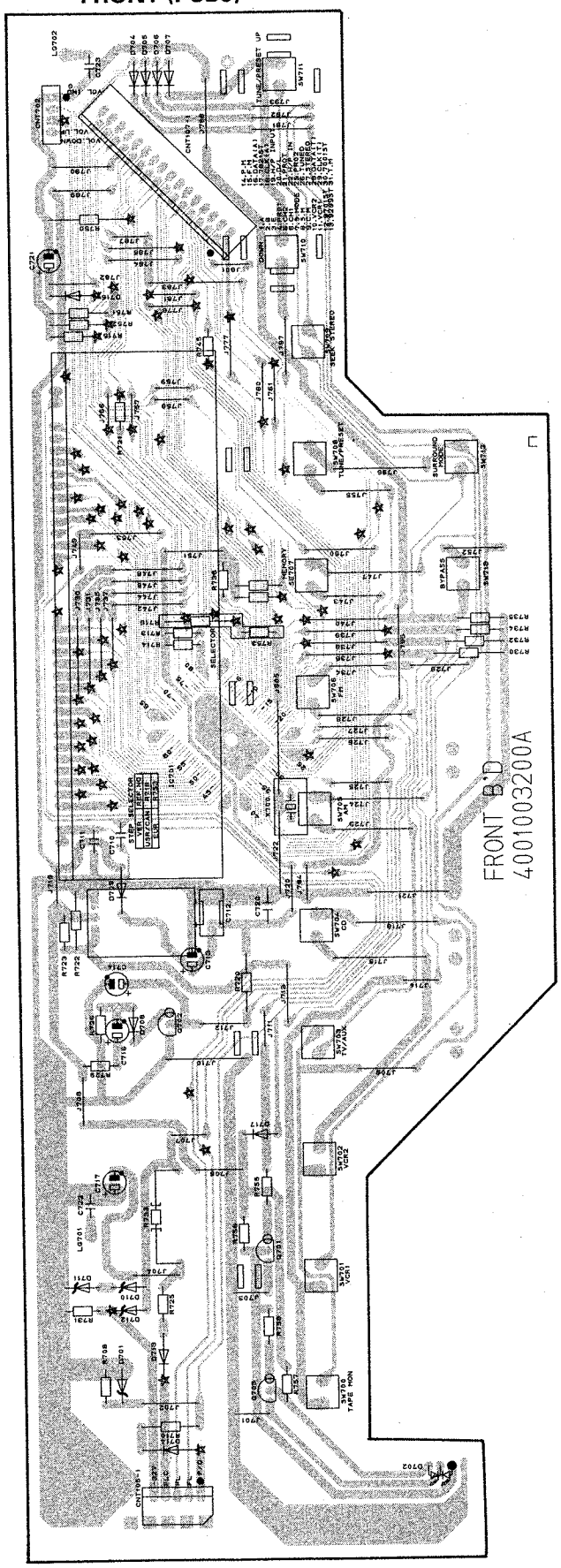
VIDEO (PCB10)



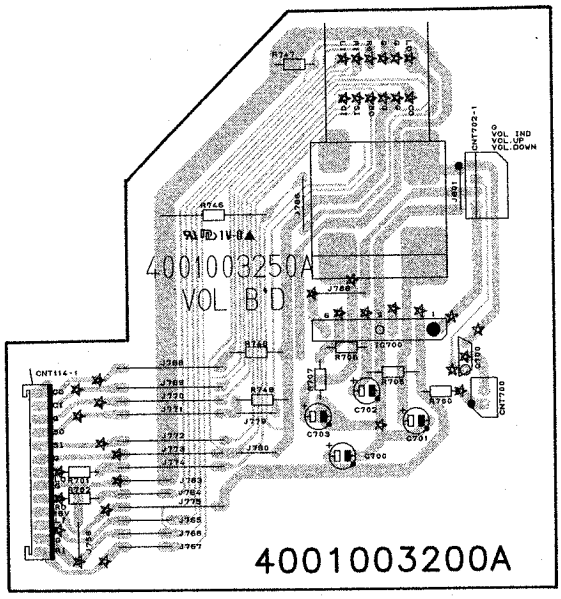
SPEAKER (PCB11)



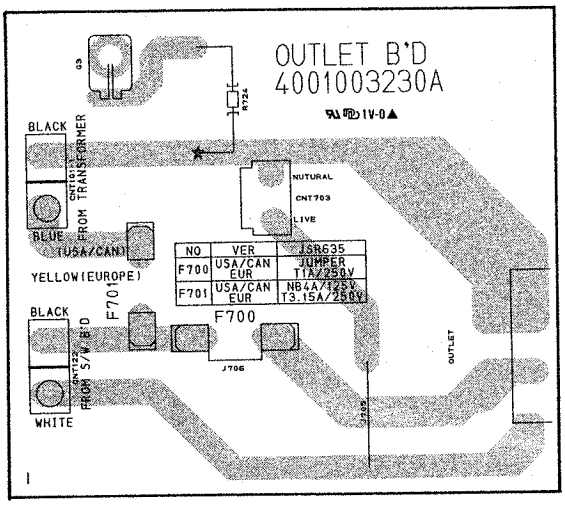
FRONT (PCB3)



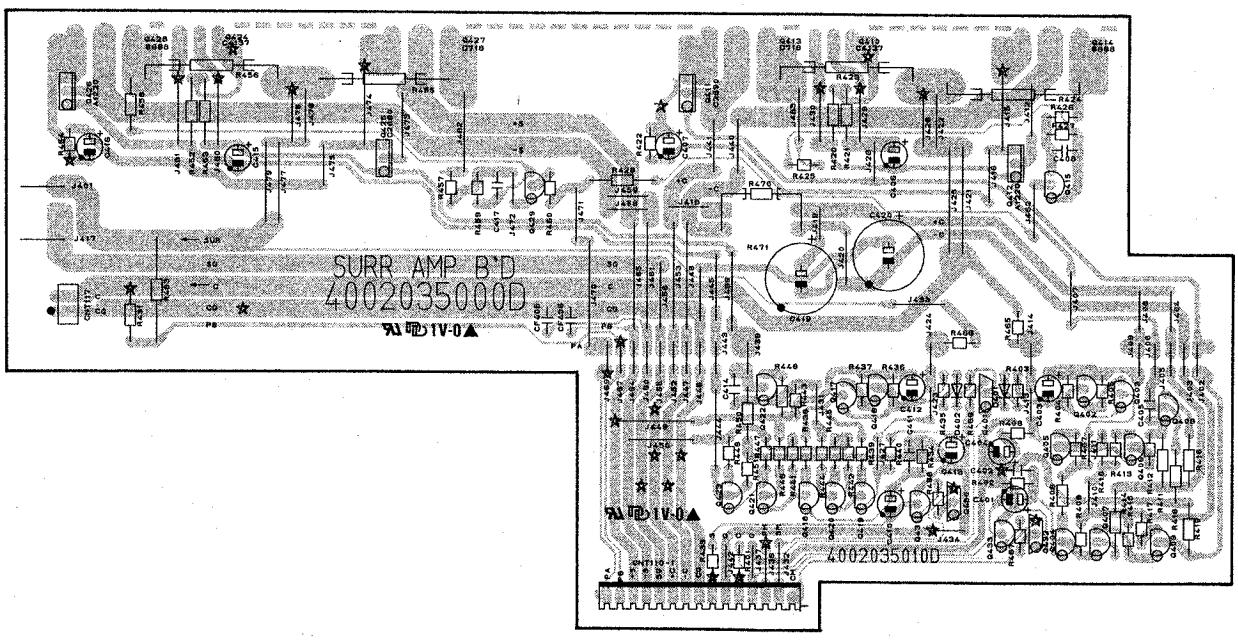
VOLUME (PCB4)



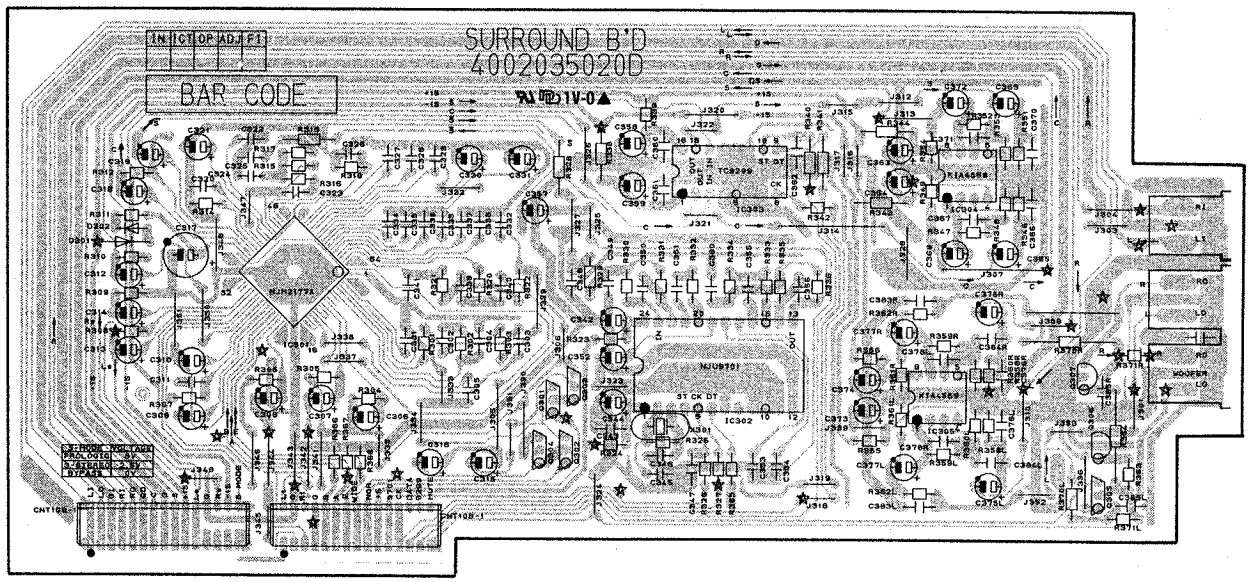
OUTLET (PCB6)



SURROUND AMP (PCB8)



SURROUND (PCB9)



ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTICE : Products marked with ⚠ have special characteristics important to safety.
If you replace any of these components, read carefully the product safety notice in this manual.
Don't degrade the safety of the product through improper servicing.
Resistor/Capacitor tolerance – D : (±0.5%), J : (±5%), K : (±10%), M : (±20%), Z : +80, – 20%)

Ref. No.	Description	Mfr. Part No.	Q'ty	Version
PCB1	ASSEMBLY P.C BOARD MAIN			
	CAPACITORS			
C107L/R	Ceramic Tubular 100 pF 50 V J	3519101935	2	
C108L/R	Ceramic Tubular 100 pF 50 V J	3519101935	2	
C109L/R	Ceramic Tubular 100 pF 50 V J	3519101935	2	
C111L/R	Ceramic Tubular 100 pF 50 V J	3519101935	2	
C113	Ceramic Tubular 100 pF 50 V J	3519101935	1	
C114/C115	Electrolytic SG 47 µF 16 V M	3479347031	2	
C116	Electrolytic SG 1 µF 50 V M	3479310971	1	
C117L/R	Electrolytic SG 4.7 µF 50 V M	3479347971	2	
C118L/R	Electrolytic SG 47 µF 16 V M	3479347031	2	
C119L/R	Electrolytic SG 47 µF 16 V M	3479347031	2	
C120/C121	Electrolytic SG 47 µF 16 V M	3479347031	2	
C136	Ceramic Disk 0.1 µF 50 V Z	3509104512	1	
C151	Not Used !			
C161L/R	Mylar 0.15 µF 63 V K	3679154297	2	
C162L/R	Ceramic Tubular 47 pF 50 V J	3519470935	2	
C163L/R	Electrolytic SG 4.7 µF 50 V M	3479347971	2	
C164L/R	Electrolytic SG 470 µF 16 V M	3479347139	2	
⚠ C170/C171	Electrolytic HS 6800 µF 50 V M	3419568224	2	
⚠ C172/C173	Electrolytic SG 2200 µF 50 V M	3409322279	2	
C174	Electrolytic SG 4.7 µF 50 V M	3479347971	1	
C175-C184	Mylar 0.047 µF 100 V J	3679473120	10	
C185	Electrolytic SG 330 µF 50 V M	3409333179	1	
C186-C188	Electrolytic SG 4.7 µF 50 V M	3479347971	3	
C200L/R	Electrolytic SG 47 µF 16 V M	3479347031	2	
C201L/R	Electrolytic SG 1 µF 50 V M	3479310971	2	
C202L/R	Ceramic Disc 68 pF 50 V J	3579680130	2	
C203L/R	Electrolytic SG 470 µF 6.3 V M	3479347111	2	
C204L/R	Ceramic Tubular 47 pF 50 V J	3519470935	2	
C205L/R	Electrolytic SG 10 µF 50 V M	3479310071	2	
C206L/R	Electrolytic SG 4.7 µF 50 V M	3479347971	2	
C207L/R	Mylar 0.068 µF 100 V J	3679683120	2	
C208L/R	Mylar 0.047 µF 100 V J	3679473120	2	
C209	Electrolytic SG 470 µF 6.3 V M	3479347111	1	
C210	Electrolytic SG 1 µF 50 V M	3479310971	1	
C211	Ceramic Disc 0.0022 µF 50 V Z	3579222130	1	
C213L/R	Electrolytic SG 330 µF 50 V M	3409333179	2	
C214L/R	Electrolytic SG 330 µF 50 V M	3409333179	2	
C215L/R	Ceramic Tubular 3.3 pF 50 V D	3519033935	2	
C216	Mylar 0.047 µF 100 V J	3679473120	1	
C217	Ceramic Disc 0.0022 µF 50 V Z	3579222130	1	
C222	Mylar 0.047 µF 100 V J	3679473120	1	
	CONNECTORS			
CNT102-1	Pin Base, 1P	4428525860	1	
CNT103-1	Pin Base, 2P	4428525780	1	
CNT104-1	Pin Base, 3P	4428525790	1	
CNT106	Wafer, 10P, B'D to B'D	4428550100	1	
CNT107	Wafer FPC, 31P	4428509029	1	
CNT108	Wafer, 15P, B'D to B'D	4428550150	1	
CNT109	Wafer, 15P, B'D to B'D	4428550150	1	
CNT110	Wafer, 15P, B'D to B'D Type	4428551520	1	
CNT111	Wafer, 5P	4428516410	1	
CNT112	Wafer, 6P	4438302927	1	
CNT113	Lead Ass'y, 5P, 280mm	436205283332	1	
CNT114	Wafer, 13P, B'D to B'D Type	4428551320	1	
CNT115	Wafer, 2P	4428516110	1	
CNT116	Wafer, 8P	4428516710	1	
CNT118	Lead Ass'y, 2P, 200mm, to CNT118-1	436102203601	1	
	DIODES			
D101	1N4148, Switching	2058322101	1	
D161L/R	1N4148, Switching	2058322101	2	
⚠ D181-D184	1N5402, Rectifier	2058100105	4	
D189/D190	BZ 16BM	2258599120	2	
D191-D195	1N4148, Switching	2058322101	5	
D200L/R	1N4148, Switching	2058322101	2	
D201L/R	1N4148, Switching	2058322101	2	
D202	UZ 9.1BSC	2258599107	1	
D203/D204	1N4148, Switching	2058322101	2	
⚠ IC107	PBL303, Bridge	2058100146	1	
	FUSES			
F101	NB 125 V, 0.5 A	5508201621	1	
F102	NB 125 V, 0.5 A	5508201621	1	
	INTEGRATED CIRCUITS			
IC101	LC7821	2168017132	1	
IC102	KIA4559P (KIA75559P), OP Amp	2168206104	1	
IC103	LC4966	2138017108	1	
IC104	Not Used !			
⚠ IC106	KIA7806PI, Regulator	2168606110	1	

Ref. No.	Description	Mfr. Part No.	Q'ty	Version
	COILS			
L101L/R	Coil, Inductor, 0.5 uH	2648001010	2	
	POSISTORS			
P201	Ass'y Posistor, 280mm	052438000280	1	
P202	PTH9M04BE222TS2F33	2438012200	1	
	TRANSISTORS			
Q101/Q102	DTC114YS	2208622106	2	
Q103/Q104	KRA107M(DTA114YS)	2238006103	2	
Q151	Not Used !			
Q161L/R	BKTC3200BL(KTC2240BL), NPN	2208606108	2	
Q162L/R	MPSA06Y, NPN	2208606114	2	
Q163L/R	MPSA56Y, PNP	2208206113	2	
Q181/Q182	BKTC3198Y(KTC1815Y), NPN	2208606104	2	
Q183	MPSA56Y, PNP	2208206113	1	
Q184/Q185	BKTC3198Y(KTC1815Y), NPN	2208606104	2	
Q186	2SD2059Y(KTD2059Y)	2028406123	1	
Q200	DTC114YS	2208622106	1	
Q201L/R	KTD1302, NPN	2208606112	2	
Q202	KRA107M(DTA114YS)	2238006103	1	
Q203L/R	KTA1268(KTA970BL), PNP	2208206104	2	
Q204L/R	KTA1268(KTA970BL), PNP	2208206104	2	
Q205L/R	KTA1268(KTA970BL), PNP	2208206104	2	
Q206L/R	KTA1266Y(KTA1015Y), PNP	2208206105	2	
Q207L/R	BKTC3200BL(KTC2240BL), NPN	2208606108	2	
Q208L/R	BKTC3200BL(KTC2240BL), NPN	2208606108	2	
Q209L/R	KTA1268(KTA970BL), PNP	2208206104	2	
Q210L/R	KTA1024Y(BKTA949Y), PNP	2208206102	2	
Q211L/R	2SC4137, NPN, Bias	2008622110	2	
Q212L/R	KTC3206Y(BKTC2229Y), NPN	2208606107	2	
Q213L/R	2SC4883, NPN	2028316100	2	
Q214L/R	2SA1859, PNP	2028016100	2	
⚠ Q215L/R	2SC3182N-O	2028307101	2	
⚠ Q216L/R	2SA1265N-O	2028007101	2	
Q217L/R	KTC3206Y(BKTC2229Y), NPN	2208606107	2	
Q218	KTA1266Y(KTA1015Y), PNP	2208206105	1	
Q219/Q220	BKTC3198Y(KTC1815Y), NPN	2208606104	2	
	RESISTORS			
R101L/R	Carbon Film 1 kohm 1/5 W J	3069102970	2	
R102L/R	Carbon Film 1 kohm 1/5 W J	3069102970	2	
R103L/R	Carbon Film 1 kohm 1/5 W J	3069102970	2	
R104L/R	Carbon Film 1 kohm 1/5 W J	3069102970	2	
R105L/R	Carbon Film 1 kohm 1/5 W J	3069102970	2	
R106L/R	Carbon Film 1 kohm 1/5 W J	3069102970	2	
R107	Carbon Film 1 kohm 1/5 W J	3069102970	1	
R108	Carbon Film 150 ohm 1/5 W J	3069151970	1	
R109	Carbon Film 100 kohm 1/5 W J	3069104970	1	
R110	Carbon Film 150 ohm 1/5 W J	3069151970	1	
R111L/R	Carbon Film 100 kohm 1/5 W J	3069104970	2	
R112L/R	Carbon Film 220 kohm 1/5 W J	3069224970	2	
R113L/R	Carbon Film 220 kohm 1/5 W J	3069224970	2	
R114/R115	Carbon Film 100 kohm 1/5 W J	3069104970	2	
R123	Carbon Film 150 ohm 1/5 W J	3069151970	1	
R151-R156	Not Used !			
R161L/R	Carbon Film 100 kohm 1/5 W J	3069104970	2	
R162L/R	Carbon Film 1 Mohm 1/5 W J	3069105970	2	
R163L/R	Carbon Film 220 kohm 1/5 W J	3069224970	2	
R164L/R	Carbon Film 15 kohm 1/5 W J	3069153970	2	
R165L/R	Carbon Film 2.4 kohm 1/5 W J	3069242970	2	
R166L/R	Carbon Film 33 ohm 1/5 W J	3069330970	2	
R167L/R	Carbon Film 33 ohm 1/5 W J	3069330970	2	
R168L/R	Carbon Film 10 ohm 1/5 W J	3069100970	2	
R169L/R	Carbon Film 100 ohm 1/5 W J	3069101970	2	
R181	Carbon Film 3.3 kohm 1/5 W J	3069332970	1	
R182-R185	Carbon Film 47 kohm 1/5 W J	3069473970	4	
R186/R187	Carbon Film 3.3 kohm 1/5 W J	3069332970	2	
⚠ R188L/R	Metal Film 47 ohm 1 W J	3029470470	2	
⚠ R189L/R	Metal Film 47 ohm 1 W J	3029470470	2	
R191/R192	Carbon Film 4.7 kohm 1/5 W J	3069472970	2	
R194	Carbon Film 3.3 kohm 1/5 W J	3069332970	1	
R200	Carbon Film 150 kohm 1/5 W J	3069154970	2	
R201L/R	Carbon Film 330 ohm 1/5 W J	3069331970	2	
R202L/R	Carbon Film 3.3 kohm 1/5 W J	3069332970	2	
R203L/R	Carbon Film 33 kohm 1/5 W J	3069333970	2	
R204L/R	Carbon Film 33 kohm 1/5 W J	3069333970	2	
R205L/R	Carbon Film 10 kohm 1/5 W J	3069103970	2	
R206L/R	Carbon Film 270 ohm 1/5 W J	3069271970	2	
R207L/R	Carbon Film 390 ohm 1/5 W J	3069391970	2	
R208L/R	Carbon Film 390 ohm 1/5 W J	3069391970	2	
R209L/R	Carbon Film 1.5 kohm 1/5 W J	3069152970	2	
R210L/R	Carbon Film 1.5 kohm 1/5 W J	3069152970	2	

Ref. No.	Description	Mfr. Part No.	Q'ty	Version
R211L/R	Carbon Film 2.2 kohm 1/5 W J	3069222970	2	
R212L/R	Carbon Film 560 ohm 1/5 W J	3069561970	2	
R213L/R	Carbon Film 560 ohm 1/5 W J	3069561970	2	
R214L/R	Carbon Film 560 ohm 1/5 W J	3069561970	2	
R215L/R	Carbon Film 560 ohm 1/5 W J	3069561970	2	
R216L/R	Carbon Film 560 ohm 1/5 W J	3069561970	2	
R217L/R	Carbon Film 560 ohm 1/5 W J	3069561970	2	
R218L/R	Carbon Film 4.7 kohm 1/5 W J	3069472970	2	
R219L/R	Carbon Film 22 kohm 1/5 W J	3069223970	2	
R220L/R	Carbon Film 22 kohm 1/5 W J	3069223970	2	
R221L/R	Metal Film 1.21 kohm 1/4 W F	3027121125	2	
R222L/R	Metal Film 470 ohm 1/4 W F	3027471250	2	
R223L/R	Carbon Film 82 ohm 1/5 W J	3069820970	2	
R224L/R	Carbon Film 82 ohm 1/5 W J	3069820970	2	
R225L/R	Carbon Film 82 ohm 1/5 W J	3069820970	2	
⚠ R226L/R	Cement 0.27 ohm 5 W J	3059027776	2	
⚠ R227L/R	Cement 0.27 ohm 5 W J	3059027776	2	
R228L/R	Carbon Film 1.8 kohm 1/5 W J	3069182970	2	
R229L/R	Carbon Film 1.5 kohm 1/5 W J	3069152970	2	
R230L/R	Carbon Film 910 ohm 1/5 W J	3069911970	2	
R231L/R	Carbon Film 6.8 kohm 1/5 W J	3069682970	2	
R232L/R	Carbon Film 22 ohm 1/5 W J	3069220970	2	
R233L/R	Carbon Film 22 ohm 1/5 W J	3069220970	2	
R234L/R	Carbon Film 24 kohm 1/5 W J	3069243970	2	
⚠ R235L/R	Metal Film 10 ohm 1 W J	3029100470	2	
R236	Carbon Film 68 kohm 1/5 W J	3069683970	1	
R237	Carbon Film 100 kohm 1/5 W J	3069104970	1	
R238	Carbon Film 3.3 kohm 1/5 W J	3069332970	1	
R239	Carbon Film 1.5 kohm 1/5 W J	3069152970	1	
R240	Carbon Film 22 kohm 1/5 W J	3069223970	1	
R241	Carbon Film 15 kohm 1/5 W J	3069153970	1	
R242	Carbon Film 10 kohm 1/5 W J	3069103970	1	
R243	Carbon Film 4.7 kohm 1/5 W J	3069472970	1	
R244	Carbon Film 1 kohm 1/5 W J	3069102970	1	
R245	Carbon Film 6.8 kohm 1/5 W J	3069682970	1	
R246L/R	Carbon Film 33 kohm 1/5 W J	3069333970	2	
	MISCELLANEOUS			
W101-103	Wire HI-WRAP, #22, 180mm, Black	152622101814	3	
12	Jack RCA, 4P	4438103110	3	
	Terminal Ground	4235007310	2	
	Clip Fuse	4255001010	4	
PCB2	**ASSEMBLY P.C.BOARD TONE**			
	CAPACITORS			
C122L/R	Electrolytic SS 47 µF 16 V M	3479147035	2	
C123L/R	Electrolytic SG 4.7 µF 50 V M	3479347971	2	
C124L/R	Ceramic Tubular 47 pF 50 V J	3519470935	2	
C125L/R	Electrolytic SS 4.7 µF 50 V M	3479247972	2	
C126L/R	Polyester 0.015 µF 63 V J	3633153187	2	
C127L/R	Polyester 0.0039 µF 63 V J	3633392187	2	
C128L/R	Polyester 0.15 µF 63 V J	3633154187	2	
C129L/R	Polyester 0.018 µF 63 V J	3633183187	2	
C130L/R	Ceramic Tubular 330 pF 50 V J	3519331935	2	
C131L/R	Polyester 0.018 µF 63 V J	3633183187	2	
C704	Ceramic Disc. 0.1 µF 50V Z	3579104530	1	
C707/C708	Ceramic Tubular 100 pF 50 V J	3519101935	2	
C709	Electrolytic SG 33 µF 16 V M	3479333031	1	
	CONNECTORS			
CNT116-1	Lead Ass'y, 8P, 120mm	436208123332	1	
CNT113-1	Connector, Wafer, 5P, Angle	4428525550	1	
	INTEGRATED CIRCUIT			
IC105	KIA4559S (KIA75559S), OP Amp	2168206103	1	
	RESISTORS			
R124	Carbon Film 150 ohm 1/5 W J	3069151970	1	
R121L/R	Carbon Film 100 kohm 1/5 W J	3069104970	2	
R125L/R	Carbon Film 100 kohm 1/5 W J	3069104970	2	
R126L/R	Carbon Film 270 kohm 1/5 W J	3069274970	2	
R127L/R	Carbon Film 1 Mohm 1/5 W J	3069105970	2	
R128L/R	Carbon Film 1 kohm 1/5 W J	3069102970	2	
R129L/R	Carbon Film 18 kohm 1/5 W J	3069183970	2	
R130L/R	Carbon Film 1.2 kohm 1/5 W J	3069122970	2	
R131L/R	Carbon Film 3.9 kohm 1/5 W J	3069392970	2	
R132L/R	Carbon Film 560 ohm 1/5 W J	3069561970	2	
R709	Carbon Film 75 ohm 1/5 W J	3069750970	1	
R711/R712	Carbon Film 1 kohm 1/5 W J	3069102970	2	
	MISCELLANEOUS			
15	Shield Fence	6163115910	1	
16	Volume, Bass/Treble	3208049510	2	
17	Volume, Balance	3208052010	1	
27	Jack RCA, 3P, VCR	4438109710	1	
	Wire Lug, #24, 200mm, Black	152624102058	1	

Ref. No.	Description	Mfr. Part No.	Q'ty	Version
PCB3	**ASSEMBLY P.C.BOARD FRONT**			
	CAPACITORS			
C710/C711	Mylar 0.047 µF 100 V J	3679473120	2	
C712	back-up 0.047 µF 5.5 V M	3439247315	1	
C713	Electrolytic SG 47 µF 10 V M	3479347021	1	
C714	Electrolytic SG 1 µF 50 V M	3479310971	1	
C716	Electrolytic SG 10 µF 50 V M	3479310071	1	
C717	Electrolytic SG 100 µF 50 V M	3479310171	1	
C720	Ceramic Tubular 0.022 µF 50 V Z	3519223530	1	
C721	Electrolytic SG 0.47 µF 50 V M	3479347871	1	
	CONNECTORS			
CNT105-1	Wafer, 5P, Angle	4428513450	1	
CNT107-1	Wafer FPC, 31P	4428531826	1	
CNT702	Lead Ass'y, 4P, 100mm	436104103331	1	
	DIODES			
D701	UZ 4.3BSB	2258599102	1	
D703	Not Used !			
D704-D709	1N4148, Switching	2058322101	6	
D710/D711	UZ 16.0BSD	2258599117	2	
D712	UZ 9.1BSC	2258599107	1	
D713	1N4002, Rectifier	2258100135	1	
D714	1N4148, Switching	2058322101	1	
D716	1N4148, Switching	2058322101	1	
D717	1N4148, Switching	2058322101	1	
	FIP			
FL700	FL Display CM1361C	2328002306	1	
	INTEGRATED CIRCUIT			
IC701	CXP82316-324Q, CPU	2138322199	1	
	TRANSISTORS			
Q701	BKTC3198Y(KTC1815Y), NPN	2208606104	1	
Q702	BKTC3198Y(KTC1815Y), NPN	2208606104	1	
	RESISTORS			
R708	Carbon Film 4.7 kohm 1/5 W J	3069472970	1	
R710	Carbon Film 4.7 kohm 1/5 W J	3069472970	1	
R713H	Carbon Film 47 kohm 1/5 W J	3069473970	1	
R714L	Carbon Film 47 kohm 1/5 W J	3069473970	1	
R715H	Carbon Film 47 kohm 1/5 W J	3069473970	1	
R716L	Carbon Film 47 kohm 1/5 W J	3069473970	1	
R717	Carbon Film 470 ohm 1/5 W J	3069471970	1	
R718	Carbon Film 3.3 kohm 1/5 W J	3069332970	1	
R720	Carbon Film 100 kohm 1/5 W J	3069104970	1	
R721	Carbon Film 330 ohm 1/5 W J	3069331970	1	
R722	Carbon Film 3.3 kohm 1/5 W J	3069332970	1	
R723	Carbon Film 47 kohm 1/5 W J	3069473970	1	
R725	Carbon Film 100 ohm 1/5 W J	3069101970	1	
R726	Carbon Film 10 kohm 1/5 W J	3069103970	1	
R729	Carbon Film 330 ohm 1/5 W J	3069331970	1	
R730	Carbon Film 100 kohm 1/5 W J	3069104970	1	
R731	Carbon Film 15 kohm 1/5 W J	3069153970	1	
R732	Carbon Film 100 kohm 1/5 W J	3069104970	1	
R733	Metal Film 390 ohm 1 W J	3029391470	1	
R734/R735	Carbon Film 100 kohm 1/5 W J	3069104970	2	
R736	Carbon Film 47 kohm 1/5 W J	3069473970	1	
R745	Carbon Film 1 kohm 1/5 W J	3069102970	1	
R750-R752	Carbon Film 100 kohm 1/5 W J	3069104970	3	
	MISCELLANEOUS			
X700	Resonator, CST10MTW-TF01	3938124010	1	
RMC1	Sensor, TEMT5380(38 kHz)	2408005001	1	
21	Holder, FL	6043010210	1	
22	Switch Tact	4658004810	14	
PCB4	**ASSEMBLY P.C.BOARD VOLUME**			
C700	CAP, Electrolytic SG 10 µF 50 V M	3479310071	1	
C701	CAP, Electrolytic SG 100 µF 10 V M	3479310121	1	
C702	CAP, Electrolytic SG 100 µF 16 V M	3479310131	1	
C703	CAP, Electrolytic SG 100 µF 10 V M	3479310121	1	
CNT114-1	Connector, Wafer, 13P	4428551320	1	
CNT700	Connector, Wafer, 2P	4428508210	1	
CNT702-1	Connector, Wafer, 4P, Angle	4428513440	1	
R700	RES, Carbon Film 680 ohm 1/5 W J	3069681970	1	
R701/R702	RES, Carbon Film 1 kohm 1/5 W J	3069102970	2	
R705	RES, Carbon Film 4.7 ohm 1/5 W J	3069479970	1	
R706	RES, Carbon Film 10 kohm 1/5 W J	3069103970	1	
R707	RES, Carbon Film 3 kohm 1/5 W J	3069302970	1	
IC700	IC, TA7291S	2168007204	1	
Q700	TR, DTC114TS	2208622108	1	
23	Volume Motor, 50 k(A)	3228020010	1	

Ref. No.	Description	Mfr. Part No.	Q'ty	Version
PCB5	**ASSEMBLY P. C. B VOLUME LED**			
D700	LED, SLR 40MG3, Green	2308220324	1	
D702	LED, SPR-54MDW3, Amber/Green	2308222205	1	
CNT700-1	Connector, Lead Ass'y, 2P, 140mm	435102143481	1	
PCB6	**ASSEMBLY P.C BOARD OUTLET**			
⚠ F700	Jumper	1508400602	1	USA/Canada
⚠ (F700)	Fuse, T 250 V, 1 A	5508302035	1	Europe
⚠ F701	Fuse, NB 125 V, 4 A	5508202921	1	USA/Canada
⚠ (F701)	Fuse, T 250 V, 2.5 A	5508302535	1	Europe
R724	RES, Carbon Film 3.3 Mohm 1/2 W J	3029335380	1	USA/Canada
(R724)	Not Used !			Europe
CNT101-1	Connector, Pin Base, 2P	4428525780	1	
CNT122	Connector, Pin Base, 2P	4428525780	1	
CNT703-1	Wafer, AC 2P	4428100281	1	
⚠ 28	Outlet, AC	4448104810	1	USA/Canada
⚠ (28)	Outlet, AC	4448103610	1	Europe
	Clip Fuse	4255001010	2	
	Terminal Ground	4235007310	1	
PCB7	**ASSEMBLY P. C. BOARD HEADPHONE**			
C715	CAP, Ceramic Disc 0.1 µF 50V Z	3579104530	1	
C718	CAP, SPK-Killer 0.0047 µF 400V	3548472340	1	
C719L/R	CAP, Ceramic Disc. 0.047 µF 50 V Z	3579473530	2	
Q703/Q704	Transistor, DTC114YS	2208622106	2	
R703	RES, Carbon Film 2 kohm 1/5 W J	3069202970	1	
R704	RES, Carbon Film 10 kohm 1/5 W J	3069103970	1	
R719	RES, Carbon Film 10 kohm 1/5 W J	3069103970	1	
R728L/R	RES, Carbon Film 100 ohm 1/5 W J	3069101970	2	
CNT111-1	Connector, Lead Ass'y, 5P, 280mm	436205283332	1	
CNT122-1	Connector, Lead Ass'y, 2P, 350mm, LV Tpye	435402353519	1	
24	Switch Power, Push Type	4628055910	1	
25	Jack, Headphone, 9P	4438005610	1	
	Wire LUG, #22, 100mm, Black	152624102058	1	
PCB8	**ASSEMBLY P. C. BOARD SURROUND AMP**			
	CAPACITORS			
C401	Electrolytic SG 47 µF 16 V M	3479347031	1	
C402	Ceramic Tubular 100 pF 50 V J	3519101935	1	
C403	Electrolytic SG 1 µF 50 V M	3479310971	1	
C404	Electrolytic SG 47 µF 25 V M	3479347041	1	
C405	Ceramic Tubular 47 pF 50 V J	3519470935	1	
C406	Electrolytic SG 10 µF 50 V M	3479310071	1	
C407	Electrolytic SG 4.7 µF 50 V M	3479347971	1	
C408	Mylar 0.068 µF 100 V J	3679683120	1	
C409	Mylar 0.047 µF 100 V J	3679473120	1	
C410	Electrolytic SG 47 µF 16 V M	3479347031	1	
C411	Ceramic Tubular 100 pF 50 V J	3519101935	1	
C412	Electrolytic SG 1 µF 50 V M	3479310971	1	
C413	Electrolytic SG 47 µF 25 V M	3479347041	1	
C414	Ceramic Tubular 47 pF 50 V J	3519470935	1	
C415	Not Used !			
C416	Electrolytic SG 4.7 µF 50 V M	3479347971	1	
C417	Mylar 0.068 µF 100 V J	3679683120	1	
C419	Electrolytic SD 220 µF 50 V M	3479422172	1	
C471	Electrolytic SD 220 µF 50 V M	3479422172	1	
	CONNECTORS			
CNT110-1	Wafer, 15P, B'D to B'D Type	4428551520	1	
CNT117	Lead Ass'y, 2P, 120mm	436102123321	1	
	DIODES			
D401/D402	1N4148, Switching	2058322101	2	
	TRANSISTORS			
Q401	DTC114YS	2208622106	1	
Q402	KTA1266Y(KTA1015Y), PNP	2208206105	1	
Q403-Q405	KTA1268(KTA970BL), PNP	2208206104	3	
Q406/Q407	KTC3200BL(KTC2240BL), NPN	2208606108	2	
Q408	KTA1024Y(BKTA949Y), PNP	2208206102	1	
Q409	KTC3206Y(BKTC2229Y), NPN	2208606107	1	
Q410	2SC4137, NPN, Bias	2008622110	1	
Q411	KSC2690AY, NPN	2008602102	1	
Q412	KSA1220AY, PNP	2008202101	1	
⚠ Q413	KTD718(2SD718), NPN	2028407109	1	
⚠ Q414	KTB688(2SB688), PNP	2028107106	1	
Q415	KTC3206Y(BKTC2229Y), NPN	2208606107	1	
Q416	KTA1266Y(KTA1015Y), PNP	2208206105	1	
Q417-Q419	KTA1268(KTA970BL), PNP	2208206104	3	
Q420/Q421	BKTC3200BL(KTC2240BL), NPN	2208606108	2	
Q422	KTA1024Y(BKTA949Y), PNP	2208206102	1	
Q423	KTC3206Y(BKTC2229Y), NPN	2208606107	1	
Q424	2SC4137, NPN, Bias	2008622110	1	
Q425	KSC2690AY, NPN	2008602102	1	
Q426	KSA1220AY, PNP	2008202101	1	
Q427	KTD718(2SD718), NPN	2028407109	1	
Q428	KTB688(2SB688), PNP	2028107106	1	
Q429	KTC3206Y(BKTC2229Y), NPN	2208606107	1	
Q430	KRA107M(DTA114YS)	2238006103	1	
Q431	2SD1302, NPN	2208606112	1	
Q432	KRA107M(DTA114YS)	2238006103	1	
Q433	2SD1302, NPN	2208606112	1	
	RESISTORS			
R401	Carbon Film 1 kohm 1/5 W J	3069102970	1	
R402/R403	Carbon Film 33 kohm 1/5 W J	3069333970	2	
R404	Carbon Film 10 kohm 1/5 W J	3069103970	1	
R405	Carbon Film 270 ohm 1/5 W J	3069271970	1	
R406/R407	Carbon Film 390 ohm 1/5 W J	3069391970	2	
R408	Carbon Film 1 kohm 1/5 W J	3069102970	1	
R409/R410	Carbon Film 1.5 kohm 1/5 W J	3069152970	2	
R411-R415	Carbon Film 560 ohm 1/5 W J	3069561970	5	
R416/R417	Carbon Film 82 ohm 1/5 W J	3069820970	2	
R418/R419	Carbon Film 22 kohm 1/5 W J	3069223970	2	
R420	Carbon Film 470 ohm 1/5 W J	3069471970	1	
R421	Carbon Film 1.2 kohm 1/5 W J	3069122970	1	
R422	Carbon Film 82 ohm 1/5 W J	3069820970	1	
⚠ R423/R424	Cement 0.27 ohm 5 W J	3059278782	2	
R425	Carbon Film 1.8 kohm 1/5 W J	3069182970	1	
R426	Carbon Film 1.5 kohm 1/5 W J	3069152970	1	
R427	Carbon Film 910 ohm 1/5 W J	3069911970	1	
R428	Carbon Film 6.8 kohm 1/5 W J	3069682970	1	
R431	Carbon Film 24 kohm 1/5 W J	3069243970	1	
R433	Carbon Film 1 kohm 1/5 W J	3069102970	1	
R434/R435	Carbon Film 33 kohm 1/5 W J	3069333970	2	
R436	Carbon Film 10 kohm 1/5 W J	3069103970	1	
R437	Carbon Film 270 ohm 1/5 W J	3069271970	1	
R438/R439	Carbon Film 390 ohm 1/5 W J	3069391970	2	
R440	Carbon Film 680 kohm 1/5 W J	3069681970	1	
R441/R442	Carbon Film 1.5 kohm 1/5 W J	3069152970	2	
R443-R447	Carbon Film 560 ohm 1/5 W J	3069561970	5	
R448/R449	Carbon Film 82 ohm 1/5 W J	3069820970	2	
R450/R451	Carbon Film 22 kohm 1/5 W J	3069223970	2	
R452	Carbon Film 470 ohm 1/5 W J	3069471970	1	
R453	Carbon Film 1.2 kohm 1/5 W J	3069122970	1	
R454	Carbon Film 82 ohm 1/5 W J	3069820970	1	
⚠ R455/R456	Cement 0.27 ohm 5 W J	3059278782	2	
R457	Carbon Film 1.8 kohm 1/5 W J	3069182970	1	
R458	Carbon Film 1.5 kohm 1/5 W J	3069152970	1	
R459	Carbon Film 910 ohm 1/5 W J	3069911970	1	
R460	Carbon Film 6.8 kohm 1/5 W J	3069682970	1	
R463	Carbon Film 24 kohm 1/5 W J	3069243970	1	
R465/R466	Carbon Film 33 kohm 1/5 W J	3069333970	2	
R467/R468	Carbon Film 3.3 kohm 1/5 W J	3069332970	2	
R469	Carbon Film 150 kohm 1/5 W J	3069154970	1	
R470/R471	Metal Film 47 ohm 1 W J	3029470470	2	
PCB9	**ASSEMBLY P. C. BOARD SURROUND**			
	CAPACITORS			
C301	Mylar 0.047 µF 100 V J	3679473120	1	
C302/C303	Mylar 0.1 µF 63V K	3679104297	2	
C304	Poly 680 pF 50 V J	3615681110	1	
C305	Mylar 0.047 µF 100 V J	3679473120	1	
C306	Electrolytic SG 22 µF 50 V M	3479322071	1	
C307-C309	Electrolytic SG 10 µF 50 V M	3479310071	3	
C310	Electrolytic SG 22 µF 50 V M	3479322071	1	
C311	Mylar 0.0047 µF 100 V J	3679472120	1	
C312	Electrolytic SG 0.47 µF 50 V M	3479347871	1	
C313/C314	Electrolytic SG 4.7 µF 50 V M	3479347971	2	
C315	Electrolytic SG 0.22 µF 50 V M	3479322871	1	
C316	Electrolytic SG 10 µF 50 V M	3479310071	1	
C317	Electrolytic SG 220 µF 16 V M	3479322131	1	
C318/C319	Electrolytic SG 4.7 µF 50 V M	3479347971	2	
C320	Mylar 0.0056 µF 100V J	3679562120	1	
C321	Electrolytic SG 220 µF 10 V M	3479322121	1	
C322	Mylar 0.047 µF 100 V J	3679473120	1	
C323	Ceramic Disc 470 pF 50 V K	3579471130	1	
C324	Mylar 0.047 µF 100 V J	3679473120	1	
C325	Mylar 0.0056 µF 100V J	3679562120	1	
C326	Mylar 0.68 µF 63V K	3679684297	1	
C327-C329	Mylar 0.22 µF 63V K	3679224297	3	
C330/C331	Electrolytic SG 4.7 µF 50 V M	3479347971	2	
C332	Mylar 0.22 µF 63V K	3679224297	1	
C333-C336	Mylar 0.1 µF 63V K	3679104297	4	
C337/C338	Mylar 0.022 µF 100V J	3679223120	2	
C339/C340	Mylar 0.1 µF 63V K	3679104297	2	

Ref. No.	Description					Mfr. Part No.	Q'ty	Version
C341	Poly	680	pF	50 V	J	3615681110	1	
C342	Electrolytic SG	100	µF	10 V	M	3479310121	1	
C343	Ceramic Tubular	0.1	µF	50 V	J	3519104935	1	
C344	Electrolytic SG	100	µF	10 V	M	3479310121	1	
C345/C346	Ceramic Disc	270	pF	50 V	K	3579271130	2	
C347	Ceramic Tubular	100	pF	50 V	J	3519101935	1	
C348/C349	Mylar	0.0056	µF	100 V	J	3679562120	2	
C350	Ceramic Disc	470	pF	50 V	K	3579471130	1	
C351	Mylar	0.1	µF	63V	J	3679104297	1	
C352	Electrolytic SG	47	µF	16 V	M	3479347031	1	
C353/C354	Mylar	0.047	µF	100 V	J	3679473120	2	
C355	Mylar	0.1	µF	63V	J	3679104297	1	
C356	Ceramic Disc	470	pF	50 V	K	3579471130	1	
C357	Electrolytic SG	1	µF	50 V	M	3479310971	1	
C358/C359	Electrolytic SG	47	µF	16 V	M	3479347031	2	
C360/C361	Ceramic Tubular	0.1	µF	50 V	J	3519104935	2	
C362	Ceramic Tubular	100	pF	50 V	J	3519101935	1	
C363/C364	Electrolytic SG	47	µF	16 V	M	3479347031	2	
C365	Electrolytic SG	4.7	µF	50 V	M	3479347971	1	
C366	Ceramic Tubular	100	pF	50 V	J	3519101935	1	
C367	Ceramic Tubular	680	pF	50 V	J	3519681935	1	
C368	Electrolytic SG	4.7	µF	50 V	M	3479347971	1	
C369	Electrolytic SG	0.47	µF	50 V	M	3479347871	1	
C370	Ceramic Tubular	100	pF	50 V	J	3519101935	1	
C371	Ceramic Tubular	680	pF	50 V	J	3519681935	1	
C372	Electrolytic SG	0.47	µF	50 V	M	3479347871	1	
C373/C374	Electrolytic SG	47	µF	16 V	M	3479347031	2	
C375L/R	Electrolytic SG	4.7	µF	50 V	M	3479347971	2	
C376L/R	Ceramic Tubular	100	pF	50 V	J	3519101935	2	
C377L/R	Electrolytic SG	4.7	µF	50 V	M	3479347971	2	
C378L/R	Ceramic Tubular	100	pF	50 V	J	3519101935	2	
C380	Mylar	0.0033	µF	100 V	J	3679332120	1	
	CONNECTORS							
CNT108-1	Wafer, 15P					4428560150	1	
CNT109-1	Wafer, 15P					4428560150	1	
	DIODES							
D301/D302	1N4148, Switching					2058322101	2	
	INTEGRATED CIRCUITS							
IC301	NJM2177AFB3					2169020000	1	
IC302	NJU9702, Delay					2168020117	1	
IC303	TC9299					2168007210	1	
IC304/IC305	KIA4559P (KIA75559P), OP Amp					2168206104	2	
	TRANSISTORS							
Q301/Q302	DTC114YS					2208622106	2	
Q303-Q305	KRA107M(DTA114YS)					2238006103	2	
Q306/Q307	2SD1302, NPN					2208606112	2	
	RESISTORS							
R301	Carbon Film	7.5	kohm	1/5 W	J	3069752970	1	
R302	Carbon Film	47	kohm	1/5 W	J	3069473970	1	
R303	Carbon Film	15	kohm	1/5 W	J	3069153970	1	
R304	Carbon Film	4.7	Mohm	1/5 W	J	3069475970	1	
R305/R306	Carbon Film	22	kohm	1/5 W	J	3069223970	2	
R307-R309	Carbon Film	100	kohm	1/5 W	J	3069104970	3	
R310	Carbon Film	10	kohm	1/5 W	J	3069103970	1	
R311	Carbon Film	68	ohm	1/5 W	J	3069680970	1	
R312	Carbon Film	100	kohm	1/5 W	J	3069104970	1	
R314	Carbon Film	100	kohm	1/5 W	J	3069104970	1	
R315	Carbon Film	15	kohm	1/5 W	J	3069153970	1	
R316/R317	Carbon Film	8.2	kohm	1/5 W	J	3069822970	2	
R318	Carbon Film	6.8	kohm	1/5 W	J	3069682970	1	
R319	Carbon Film	330	kohm	1/5 W	J	3069334970	1	
R320	Carbon Film	7.5	kohm	1/5 W	J	3069752970	1	
R321	Carbon Film	47	kohm	1/5 W	J	3069473970	1	
R322	Carbon Film	15	kohm	1/5 W	J	3069153970	1	
R323	Carbon Film	56	ohm	1/5 W	J	3069560970	1	
R324	Carbon Film	47	ohm	1/5 W	J	3069470970	1	
R325	Carbon Film	1	Mohm	1/5 W	J	3069105970	1	
R326/R327	Carbon Film	1	kohm	1/5 W	J	3069102970	2	
R328	Carbon Film	8.2	kohm	1/5 W	J	3069822970	1	
R329	Carbon Film	7.5	kohm	1/5 W	J	3069752970	1	
R330	Carbon Film	18	kohm	1/5 W	J	3069183970	1	
R331	Carbon Film	5.6	kohm	1/5 W	J	3069562970	1	
R332/R333	Carbon Film	22	ohm	1/5 W	J	3069220970	2	
R334	Carbon Film	15	kohm	1/5 W	J	3069153970	1	
R335	Carbon Film	18	kohm	1/5 W	J	3069183970	1	
R336	Carbon Film	15	kohm	1/5 W	J	3069153970	1	
R338/R339	Carbon Film	150	ohm	1/5 W	J	3069151970	2	
R340-R342	Carbon Film	1	kohm	1/5 W	J	3069102970	3	
R343/R344	Carbon Film	150	ohm	1/5 W	J	3069151970	2	
R346	Carbon Film	100	kohm	1/5 W	J	3069104970	1	
R347	Carbon Film	8.2	kohm	1/5 W	J	3069822970	1	
R348	Carbon Film	1.8	kohm	1/5 W	J	3069182970	1	
R349	Carbon Film	100	kohm	1/5 W	J	3069104970	1	
R351	Carbon Film	47	kohm	1/5 W	J	3069473970	1	
R352	Carbon Film	8.2	kohm	1/5 W	J	3069822970	1	
R353	Carbon Film	1.8	kohm	1/5 W	J	3069182970	1	
R354	Carbon Film	10	kohm	1/5 W	J	3069103970	1	
R355/R356	Carbon Film	150	ohm	1/5 W	J	3069151970	2	
R358L/R	Carbon Film	100	kohm	1/5 W	J	3069104970	2	
R359L/R	Carbon Film	1.5	kohm	1/5 W	J	3069152970	2	
R360L/R	Carbon Film	9.1	kohm	1/5 W	J	3069912970	2	
R361L/R	Carbon Film	100	kohm	1/5 W	J	3069104970	2	
R362L/R	Carbon Film	1	kohm	1/5 W	J	3069102970	2	
R363/R364	Carbon Film	3.3	kohm	1/5 W	J	3069332970	2	
R365	Carbon Film	1	kohm	1/5 W	J	3069102970	1	
R366-R368	Carbon Film	100	kohm	1/5 W	J	3069104970	3	
	MISCELLANEOUS							
X301	Resonator, CSA2.00MG					3938131740	1	
13	Jack RCA, 6P					4438103210	1	
PCB10	**ASSEMBLY P. C. BOARD VIDEO**							
	CAPACITORS							
C501	Ceramic Tubular	5	pF	50 V	D	3519050935	1	
C502	Electrolytic SG	33	µF	16 V	M	3479333031	1	
C503	Ceramic Tubular	5	pF	50 V	D	3519050935	1	
C504/C505	Electrolytic SG	470	µF	10 V	M	3479347121	2	
C506	Electrolytic SG	100	µF	10 V	M	3479310121	1	
C507	Ceramic Tubular	0.1	µF	50 V	J	3519104935	1	
	INTEGRATED CIRCUIT							
IC501	GD4066B					2138001101	1	
	TRANSISTORS							
Q501	BKTC3198Y(KTC1815Y), NPN					2208606104	1	
Q502	KTA1266Y(KTA1015Y), PNP					2208206105	1	
Q503	BKTC3198Y(KTC1815Y), NPN					2208606104	1	
Q504	KTA1266Y(KTA1015Y), PNP					2208206105	1	
	RESISTORS							
R501	Carbon Film	8.2	kohm	1/5 W	J	3069822970	1	
R502	Carbon Film	12	kohm	1/5 W	J	3069123970	1	
R503	Carbon Film	150	ohm	1/5 W	J	3069151970	1	
R504/R505	Carbon Film	1.2	kohm	1/5 W	J	3069122970	2	
R506	Carbon Film	180	ohm	1/5 W	J	3069181970	1	
R507	Carbon Film	75	ohm	1/5 W	J	3069750970	1	
R508	Carbon Film	12	kohm	1/5 W	J	3069123970	1	
R509	Carbon Film	8.2	kohm	1/5 W	J	3069822970	1	
R510	Carbon Film	1.2	kohm	1/5 W	J	3069122970	1	
R511	Carbon Film	150	ohm	1/5 W	J	3069151970	1	
R512	Carbon Film	1.2	kohm	1/5 W	J	3069122970	1	
R513	Carbon Film	180	ohm	1/5 W	J	3069181970	1	
R514/R515	Carbon Film	75	ohm	1/5 W	J	3069750970	2	
R516	Carbon Film	100	ohm	1/5 W	J	3069101970	1	
R517/R518	Carbon Film	100	kohm	1/5 W	J	3069104970	2	
	MISCELLANEOUS							
CNT112-1	Connector, Wafer, 6P					4408100914	1	
20	Jack RCA(VCR1/Monitor), 3P					4438114310	1	
PCB11	**ASSEMBLY P. C. BOARD CENTER SPEAKER**							
CF401/402	Ceramic Tubular	4700	µF	50 V	J	3519472935	2	
R429/R430	RES, Carbon Film	22	ohm	1/5 W	J	3069220970	2	
R432	RES, Metal Film	10	ohm	1 W	J	3029100470	1	
L401	Coil, Inductor, 0.5 uH					2648001010	1	
CNT117-1	Connector, Wafer, 2P					4428508210	1	
19	Terminal, Speaker Center, Screw Type, 2P					4408108710	1	
PCB12	**ASSEMBLY P. C. BOARD TUNER**							
	CAPACITORS							
C801	Electrolytic SG	100	µF	25 V	M	3479310141	1	
C802	Ceramic Tubular	0.022	µF	50 V	Z	3519223935	1	
C804-C809	Ceramic Tubular	0.022	µF	50 V	Z	3519223935	6	
C810	Electrolytic SG	47	µF	25 V	M	3479347041	1	
C811	Ceramic Tubular	82	pF	50 V	J	3519820935	1	Europe
C812	Ceramic Tubular	100	pF	50 V	J	3519101935	1	Europe
C813	Mylar	0.047	µF	100 V	J	3679473120	1	
C814	Ceramic Tubular	330	pF	50 V	J	3519331935	1	USA/Canada
(C814)	Ceramic Tubular	100	pF	50 V	J	3519101935	1	Europe
C815	Electrolytic SG	0.47	µF	50 V	M	3479347871	1	
C816	Ceramic Tubular	0.022	µF	50 V	Z	3519223935	1	
C817	Electrolytic SG	4.7	µF	50 V	M	3479347971	1	

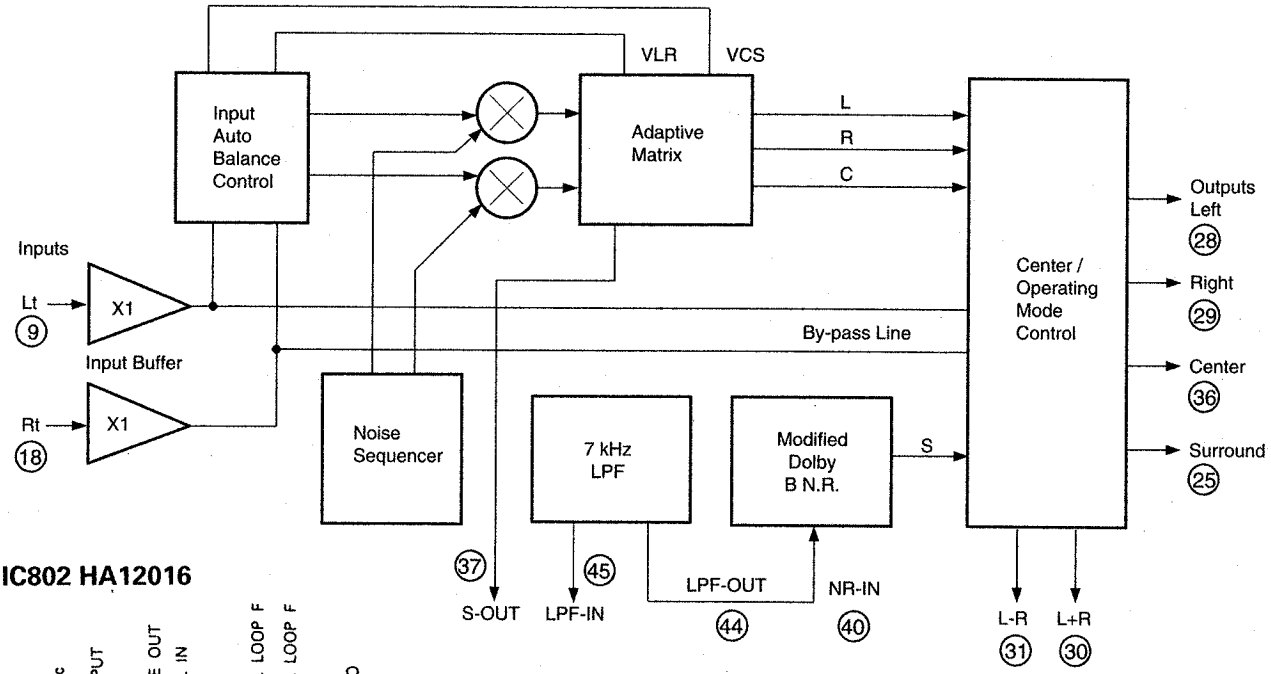
Ref. No.	Description					Mfr. Part No.	Q'ty	Version
C818	Electrolytic SG	3.3	µF	50 V	M	3479333971	1	
C819	Electrolytic SG	4.7	µF	50 V	M	3479347971	1	
C820	Ceramic Tubular	47	pF	50 V	J	3519470935	1	
C821	Ceramic Tubular	0.022	µF	50 V	Z	3519223935	1	
C822	Mylar	0.0027	µF	100 V	J	3679272120	1	
C823	Electrolytic SG	2.2	µF	50 V	M	3479322971	1	
C824/C825	Ceramic Disc, CH	33	pF	50 V	J	3528330210	2	
C828	Ceramic Tubular	100	pF	50 V	J	3519101935	1	
C829	Ceramic Tubular	0.01	µF	50 V	J	3519103935	1	
C830	Electrolytic SG	1	µF	50 V	M	3479310971	1	
C831	Electrolytic SG	47	µF	25 V	M	3479347041	1	
C832	Ceramic Tubular	0.022	µF	50 V	Z	3519223935	1	
C833	Electrolytic SG	47	µF	25 V	M	3479347041	1	
C834	Ceramic Tubular	0.022	µF	50 V	Z	3519223935	1	
C835	Ceramic Disc	0.047	µF	50 V	Z	3579473530	1	
C836	Poly	470	pF	50 V	J	3615471110	1	
C837	Electrolytic SG	10	µF	50 V	M	3479310071	1	
C838	Ceramic Tubular	0.022	µF	50 V	Z	3519223935	1	
C839	Ceramic Tubular	0.01	µF	50 V	J	3519103935	1	
C840	Electrolytic SG	3.3	µF	50 V	M	3479333971	1	
C841/C842	Electrolytic SG	1	µF	50 V	M	3479310971	2	
C843	Electrolytic SG	3.3	µF	50 V	M	3479333971	1	
C844	Poly	1000	pF	50 V	J	3615102110	1	
C845	Mylar	0.047	µF	100 V	J	3679473120	1	
C846	Ceramic Tubular	680	pF	50 V	J	3519681935	1	
C847/C848	Electrolytic SG	22	µF	25 V	M	3479322041	2	
C849/C850	Mylar	0.0015	µF	100 V	J	3679152120	2	USA/Canada
(C849/C850)	Mylar	0.001	µF	100 V	J	3679102120	2	Europe
C851	Ceramic Tubular	150	pF	50 V	J	3519151935	1	
C852/C853	Electrolytic SG	2.2	µF	50 V	M	3479322971	2	
C854/C855	Mylar	0.0022	µF	100 V	J	3679222120	2	
C858	Electrolytic SG	100	µF	25 V	M	3479310141	1	
C861	Ceramic Tubular	270	pF	50 V	J	3519271935	1	Europe
	FILTERS							
CF801/802	SFE10.7MS3GH-ATF21					3978011011	2	
CF803	SFE10.7MS3GH-ATF21					3978011011	1	Europe
CF804	Ceramic, SFZ450F					3908001380	1	
CF805	Ceramic, BFU450C					3908001020	1	
	DIODES							
D801	UZ 5.1BSB					2258599103	1	
D802/D803	1N4148, Switching					2058322101	2	
	INTEGRATED CIRCUITS							
IC801	LA1266					2168017128	1	
IC802	HA12016					2168411105	1	
IC803	LM7001					2138017112	1	
	TRANSISTORS							
Q801	KTC1923Y(KTC3194Y), NPN					2208406103	1	
Q802	2SK168, N-CH., FET					2018211100	1	
Q803	BKTC3200BL(KTC2240BL), NPN					2208606108	1	
Q804	KRA107M(DTA114YS)					2238006103	1	
Q805/Q806	KTD1302, NPN					2208606112	2	
Q807/Q808	KRA107M(DTA114YS)					2238006103	2	
	RESISTORS							
R801	Carbon Film	62	kohm	1/5 W	J	3069623970	1	Europe
R802	Carbon Film	100	kohm	1/5 W	J	3069104970	1	Europe
R803	Carbon Film	470	ohm	1/5 W	J	3069471970	1	
R804	Carbon Film	3.3	kohm	1/5 W	J	3069332970	1	
R805	Carbon Film	330	ohm	1/5 W	J	3069331970	1	
R806	Carbon Film	470	ohm	1/5 W	J	3069471970	1	
R807	Carbon Film	10	kohm	1/5 W	J	3069103970	1	
R808	Carbon Film	3.3	kohm	1/5 W	J	3069332970	1	
R809	Carbon Film	47	kohm	1/5 W	J	3069473970	1	
R810	Carbon Film	82	ohm	1/5 W	J	3069820970	1	
R811	Carbon Film	24	kohm	1/5 W	J	3069243970	1	
R812	Carbon Film	10	kohm	1/5 W	J	3069103970	1	
R813	Carbon Film	68	kohm	1/5 W	J	3069683970	1	
R814	Carbon Film	4.7	kohm	1/5 W	J	3069472970	1	
R815	Carbon Film	2.2	kohm	1/5 W	J	3069222970	1	USA/Canada
(R815)	Carbon Film	3.3	kohm	1/5 W	J	3069332970	1	Europe
R816	Carbon Film	2.7	kohm	1/5 W	J	3069272970	1	USA/Canada
(R816)	Carbon Film	1.8	kohm	1/5 W	J	3069182970	1	Europe
R817/R818	Carbon Film	100	kohm	1/5 W	J	3069104970	2	
R819/R820	Carbon Film	220	ohm	1/5 W	J	3069221970	2	
R821-R823	Carbon Film	1	kohm	1/5 W	J	3069102970	3	
R824	Carbon Film	820	ohm	1/5 W	J	3069821970	1	
R825	Carbon Film	1.5	kohm	1/5 W	J	3069152970	1	
R826	Carbon Film	10	kohm	1/5 W	J	3069103970	1	
R827	Carbon Film	1	kohm	1/5 W	J	3069102970	1	
R828	Carbon Film	100	ohm	1/5 W	J	3069101970	1	
R829/R830	Carbon Film	100	kohm	1/5 W	J	3069104970	2	

Ref. No.	Description					Mfr. Part No.	Q'ty	Version
R831/R832	Carbon Film	22	kohm	1/5 W	J	3069223970	2	
R833/R834	Carbon Film	2.7	kohm	1/5 W	J	3069272970	2	USA/Canada
(R833/R834)	Carbon Film	2	kohm	1/5 W	J	3069102970	2	Europe
R835/R836	Carbon Film	47	kohm	1/5 W	J	3069473970	2	
R837	Carbon Film	3.9	kohm	1/5 W	J	3069392970	1	
R838/R839	Carbon Film	3.3	kohm	1/5 W	J	3069332970	2	USA/Canada
(R838/R839)	Carbon Film	2.4	kohm	1/5 W	J	3069242970	2	Europe
R839/R841	Carbon Film	3.3	kohm	1/5 W	J	3069332970	2	
R842/R843	Carbon Film	1	kohm	1/5 W	J	3069102970	2	
R844/R845	Carbon Film	3.3	kohm	1/5 W	J	3069332970	2	
R846	Carbon Film	1	kohm	1/5 W	J	3069102970	1	
R847	Carbon Film	5.6	kohm	1/5 W	J	3069562970	1	
R848	Carbon Film	22	kohm	1/5 W	J	3069223970	1	
R849	Carbon Film	47	kohm	1/5 W	J	3069473970	1	
R850/R851	Carbon Film	10	kohm	1/5 W	J	3069103970	2	
R852	Carbon Film	1	kohm	1/5 W	J	3069102970	1	
R854	Carbon Film	100	ohm	1/5 W	J	3069101970	1	
R855	Carbon Film	22	kohm	1/5 W	J	3069223970	1	
R856	Carbon Film	47	kohm	1/5 W	J	3069473970	1	
R857	Carbon Film	1	kohm	1/5 W	J	3069102970	1	Europe
R890-R898	Carbon Film	270	ohm	1/5 W	J	3069271970	9	
	COILS							
L801	Coil, Inductor, 20.8 mH					2648050443	1	Europe
T801	AM-ANT					2608201120	1	
T802	AM-OSC					2638201150	1	
T803	FM Quad DET(A)					2838501110	1	
T804	FM Quad DET(B)					2838501210	1	
T805	AM-IFT, P-7SB					2848001250	1	
T806	Filter, 19KHz/38KHz, MPX BLK					2658001050	1	
T807	Filter, 19KHz/38KHz, MPX BLK					2658001050	1	
	TRIMMERS							
TC801	TZ03-T200FR					3838001010	1	
TC802	TZ03-T110FR					3838001000	1	
	SEMI FIXED RESISTORS							
VR801	5 k(B)					3248050243	1	
VR802	20 k(B)					3248020343	1	
VR803	5 k(B)					3248050243	1	
VR804	200 k(B)					3248050443	1	
	MISCELLANEOUS							
CNT106-1	Connector, Wafer, 10P					4428560100	1	
29	Terminal, Antenna					4408108310	1	USA/Canada
(29)	Terminal, Antenna					4408108210	1	Europe
VD1/VD2	Diode Varactor, 'KV1236Z					2058819106	1	
XT801	Crystal, 7.2MHz					3978101031	1	
	F/E FTH3-505H 3					3928101790	1	

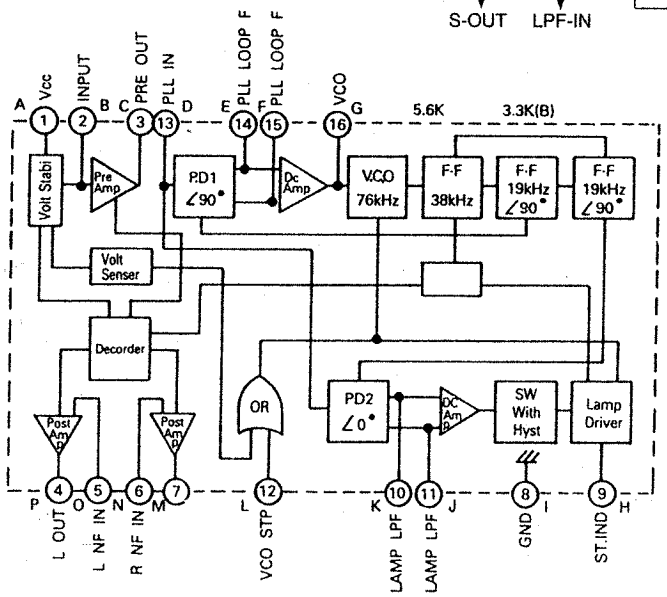
PCB13	ASSEMBLY P. C. BOARD REAR SPEAKER							
CF403	Ceramic Tubular	3300	pF	50 V	J	3519332935	1	
C418	CAP, Mylar	0.047	µF	100 V	J	3679473120	1	
R461/R462	RES, Carbon Film	22	ohm	1/5 W	J	3069220970	2	
R464	RES, Metal Film	10	ohm	1 W	J	3029100470	1	
L402	Coil, Inductor, 0.5 uH					2648001010	1	
14	Terminal Speaker Rear, 4P					4408108910	1	

IC FUNCTIONAL BLOCK DIAGRAM

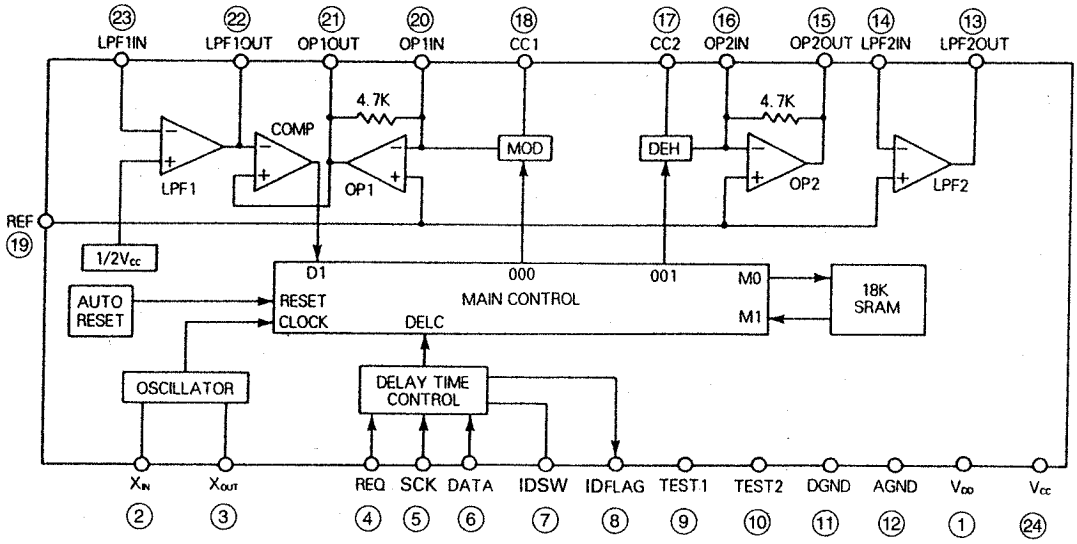
IC301 NJM2177AFB3



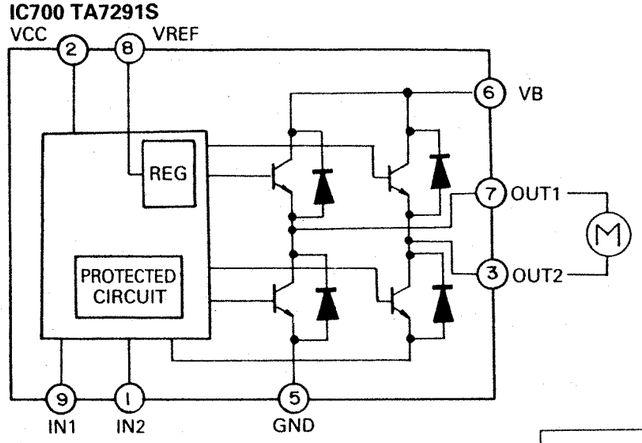
IC802 HA12016



IC302 NJU9701



IC700 TA7291S



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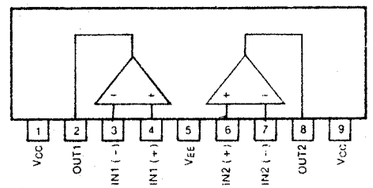
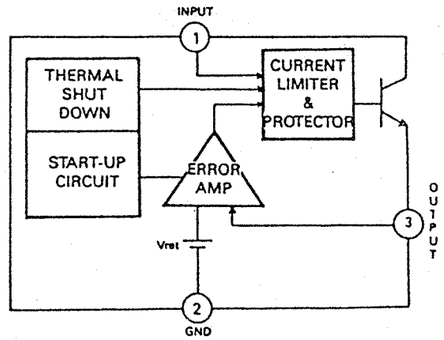
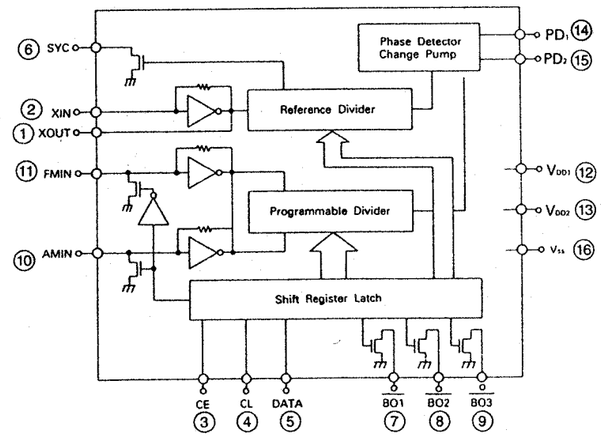


IC106 KIA7806PI

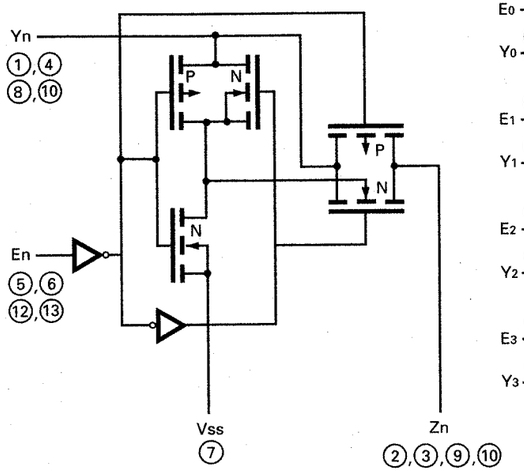


IC803 LM7001

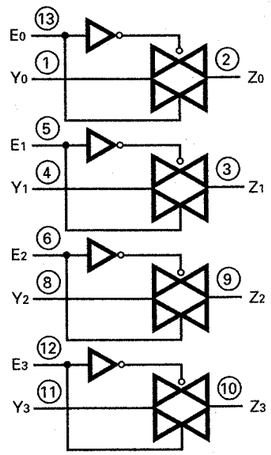


IC501 GD4066B

LOGIC DIAGRAM (1/4 OF A 4066B)

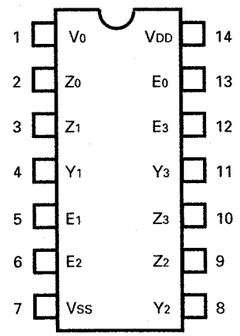


LOGIC SYSBOL



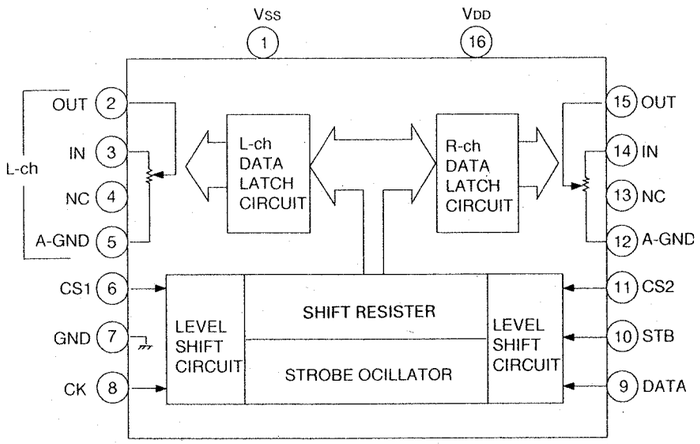
VDD = Pin14
Vss = Pin7
○ = Pin Numbers

CONNECTION DIAGRAM DIP(TOP VIEW)

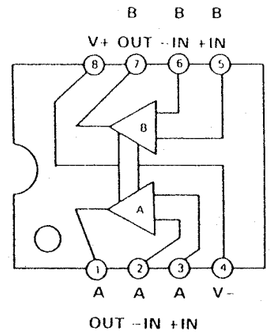


NOTE:
The SO Package has the same pinoute (Connection Diagram) as the Dual-IIne Package.

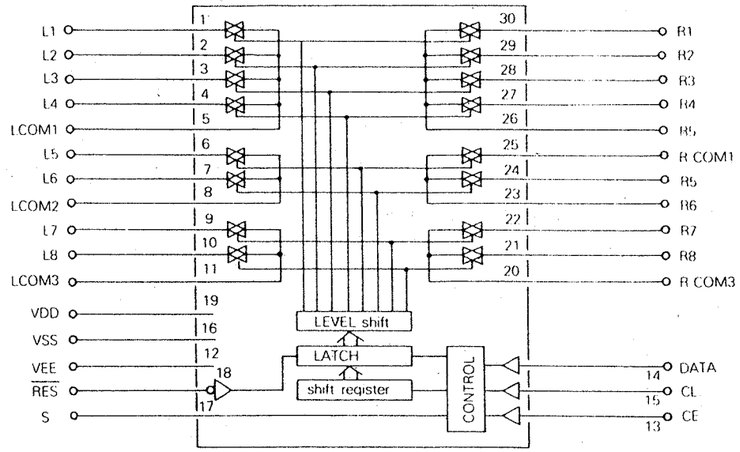
IC303 TC9299



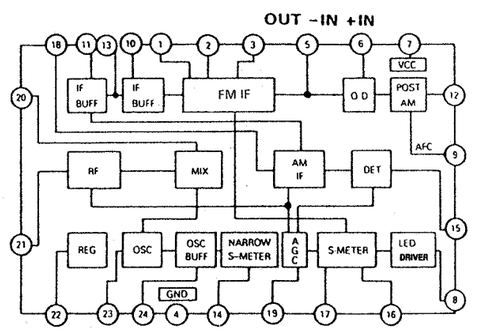
IC102
IC304, IC305
KIA4559S/KIA75559P



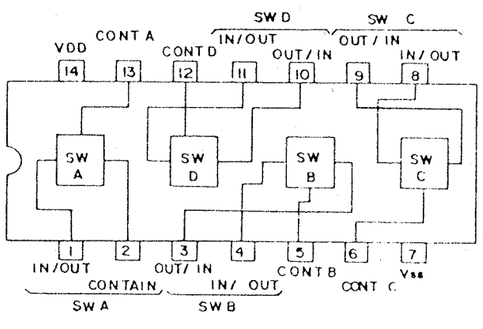
IC101 LC7821



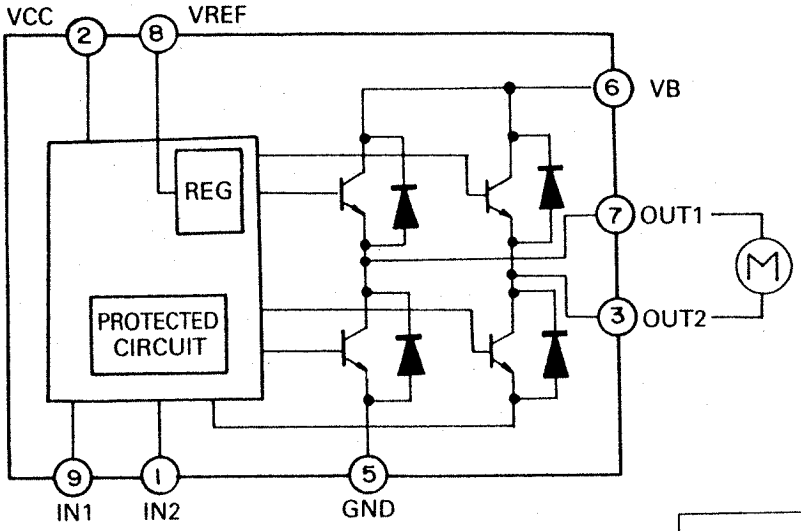
IC801 LA1266



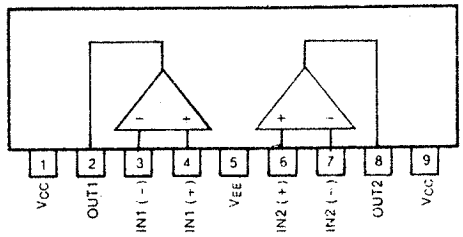
IC103 LC4966



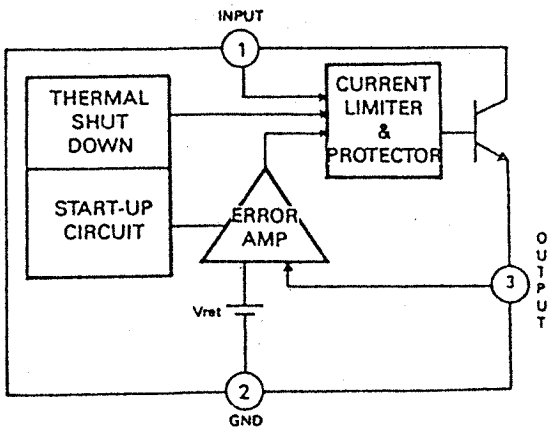
IC700 TA7291S



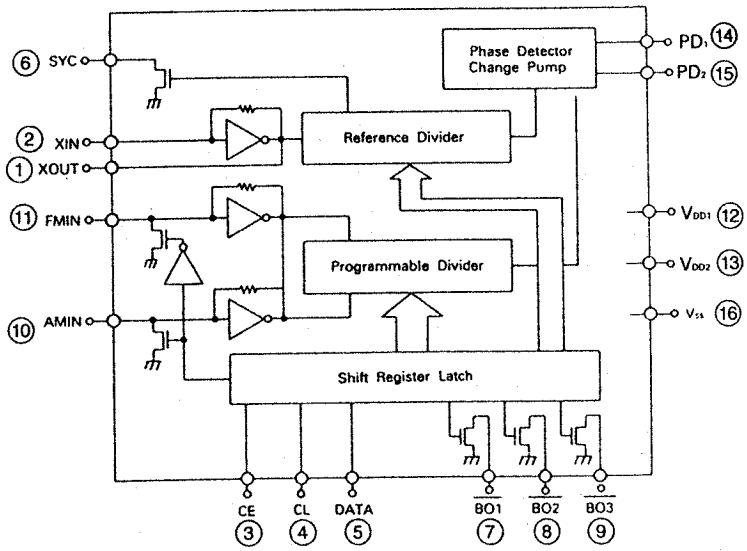
IC105 KIA4559S/KIA75559S



IC106 KIA7806PI

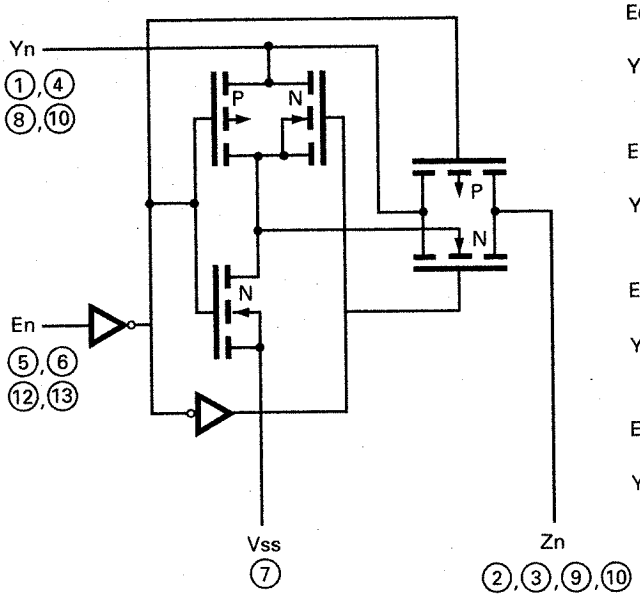


IC803 LM7001

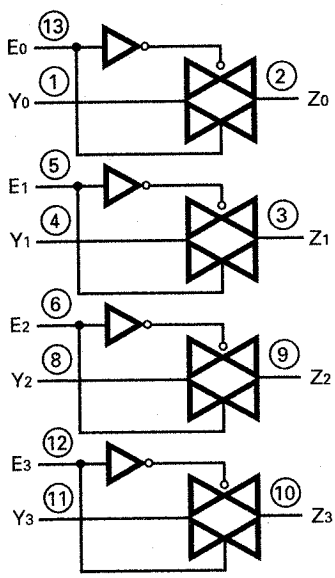


IC501 GD4066B

LOGIC DIAGRAM (1/4 OF A 4066B)

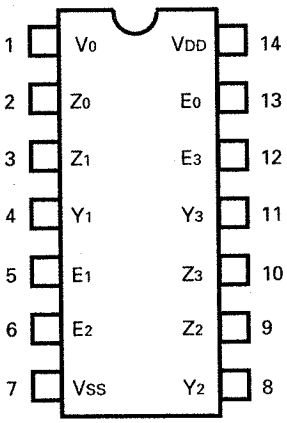


LOGIC SYSBOL



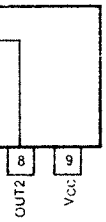
VDD = Pin14
Vss = Pin7
○ = Pin Numbers

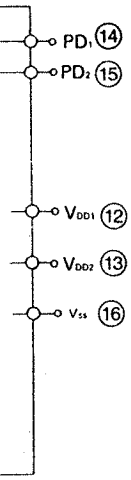
CONNECTION DIAGRAM DIP(TOP VIEW)



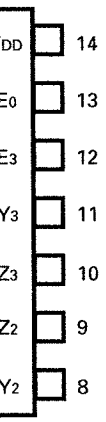
NOTE:
The SO Package has the same pInoute (Connection Diagram) as the Dual-IIne Package.

S



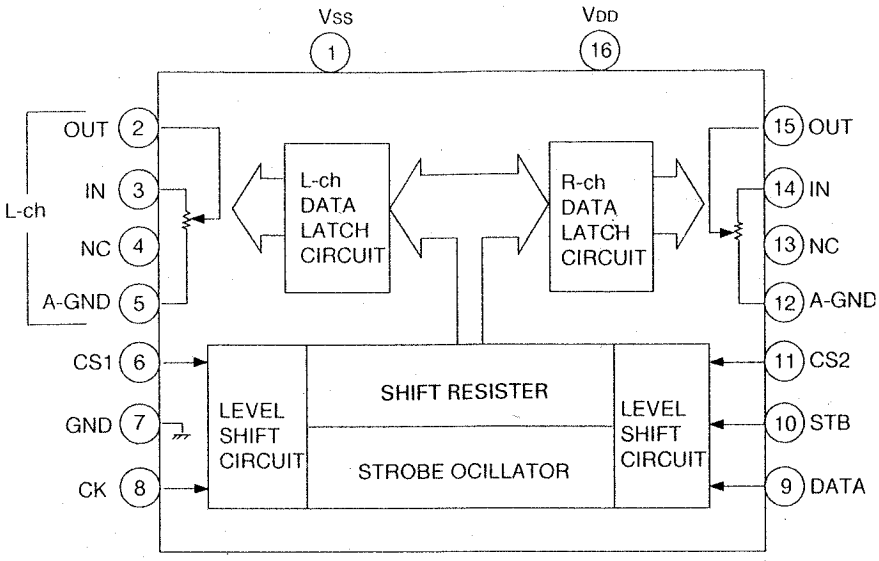


GRAM
V)

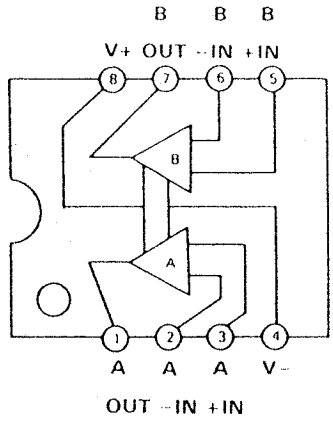


the same
Diagram)
age.

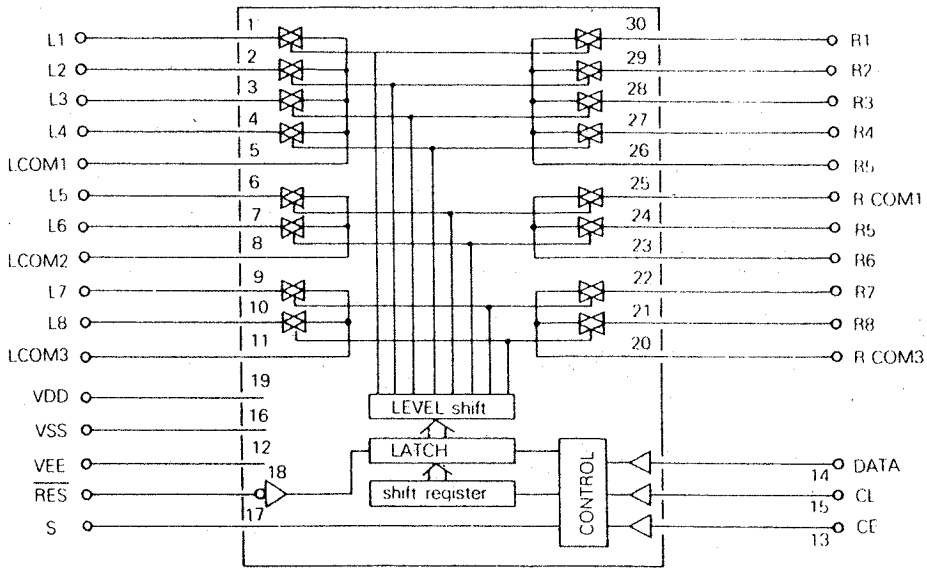
IC303 TC9299



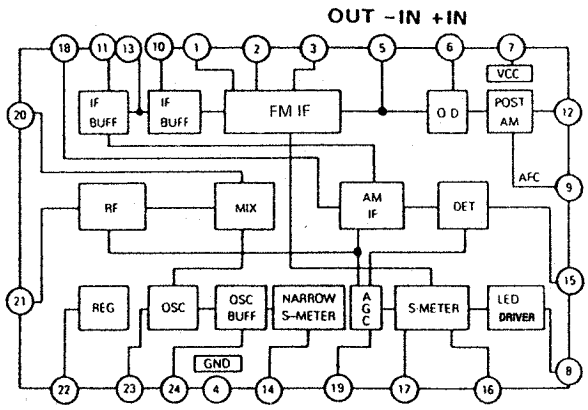
IC102
IC304, IC305
KIA4559S/KIA75559P



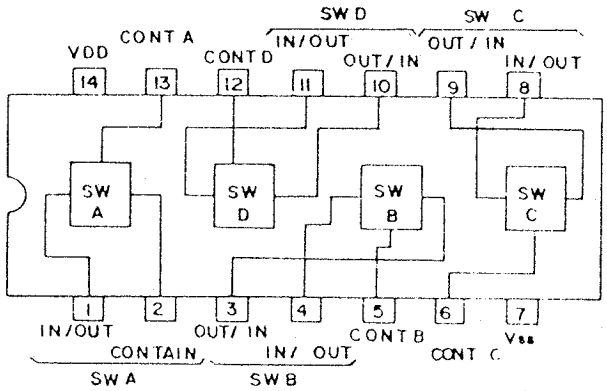
IC101 LC7821



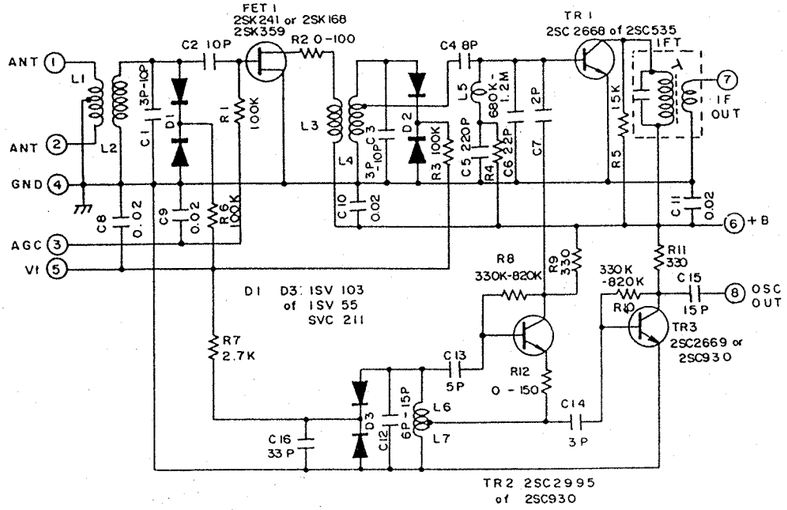
IC801 LA1266



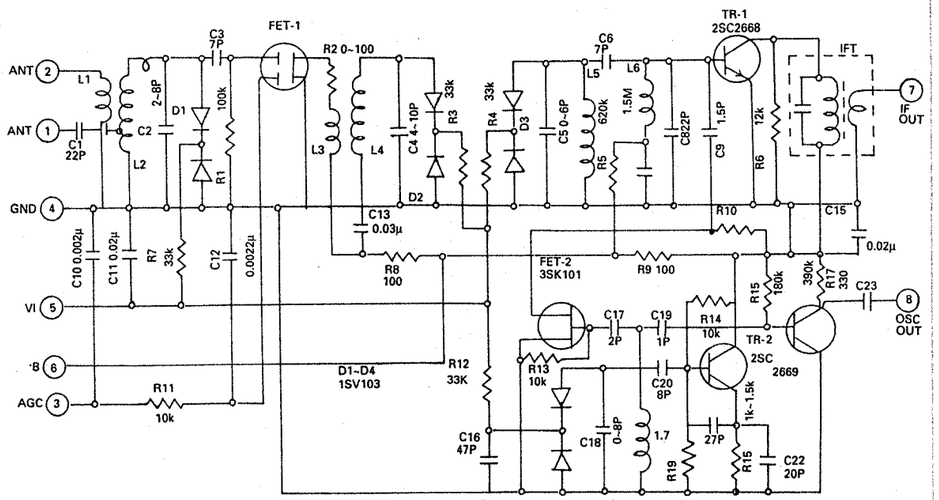
IC103 LC4966



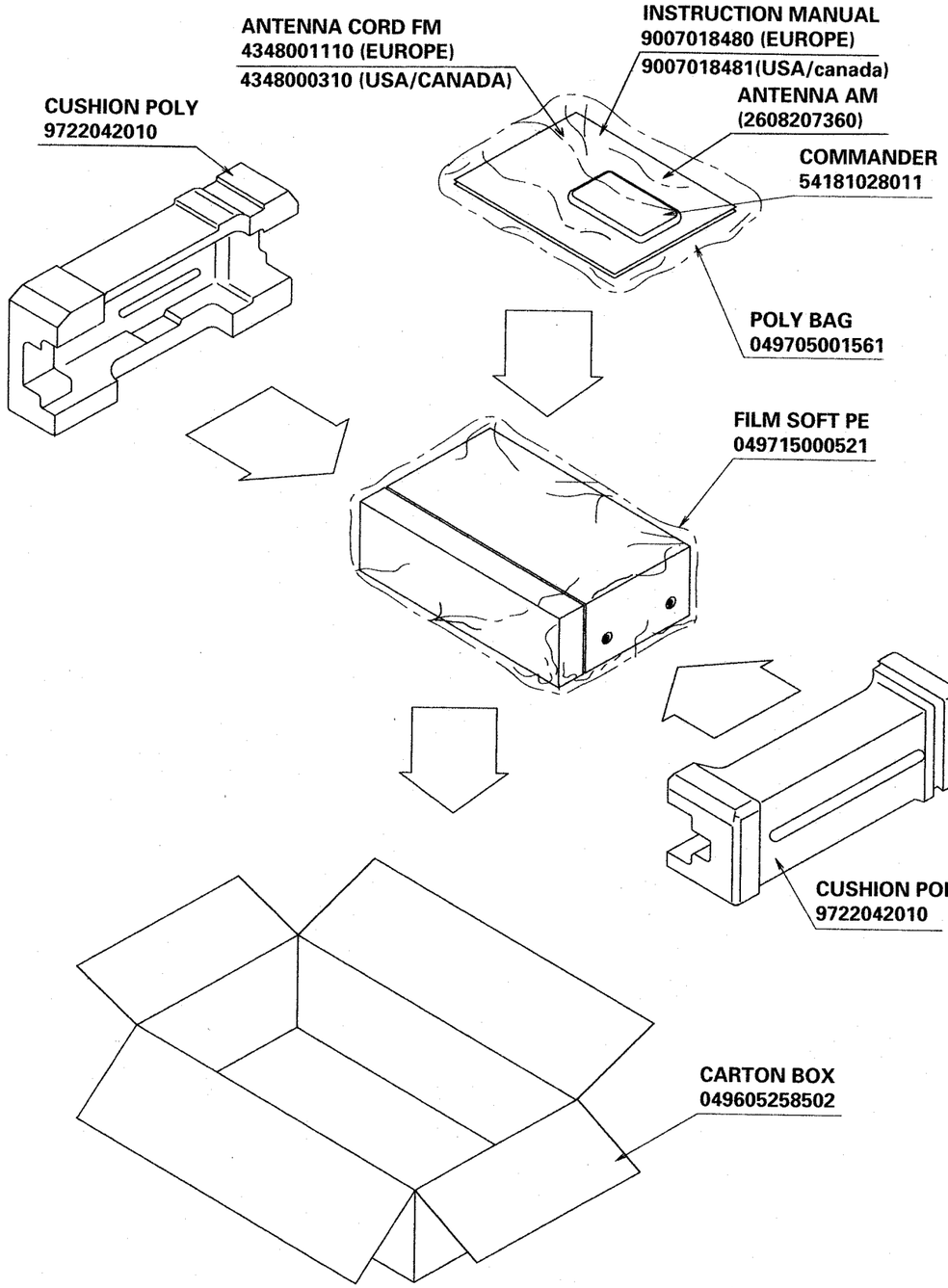
FRONT-END FJH3-505H USA/CANADA VERSION



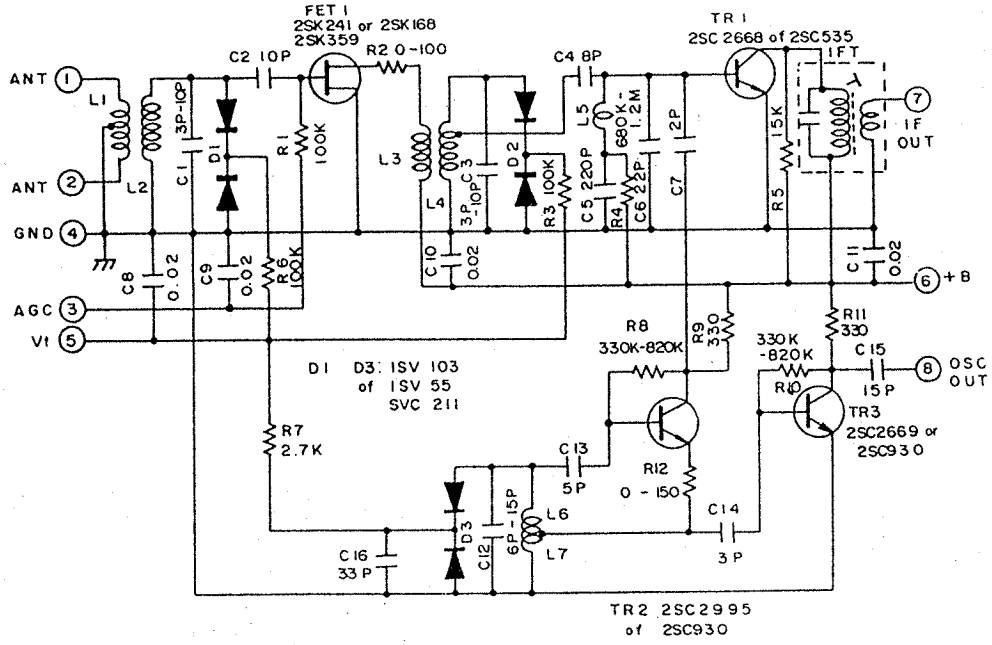
FRONT-END FE407-G60 EUROPE VERSION



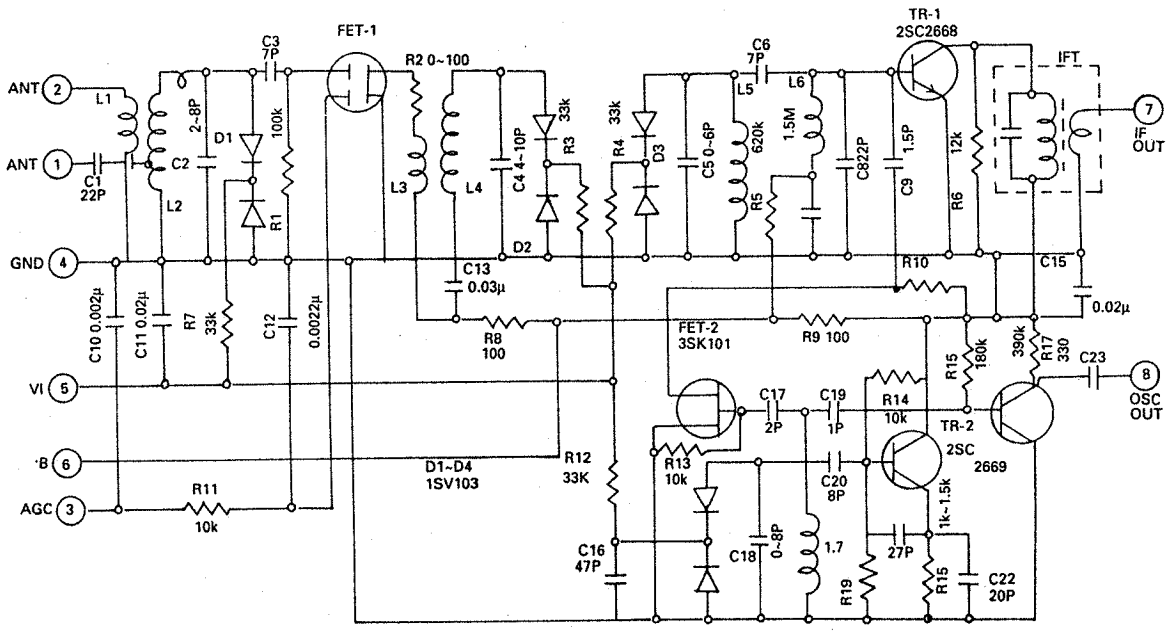
PACKAGE



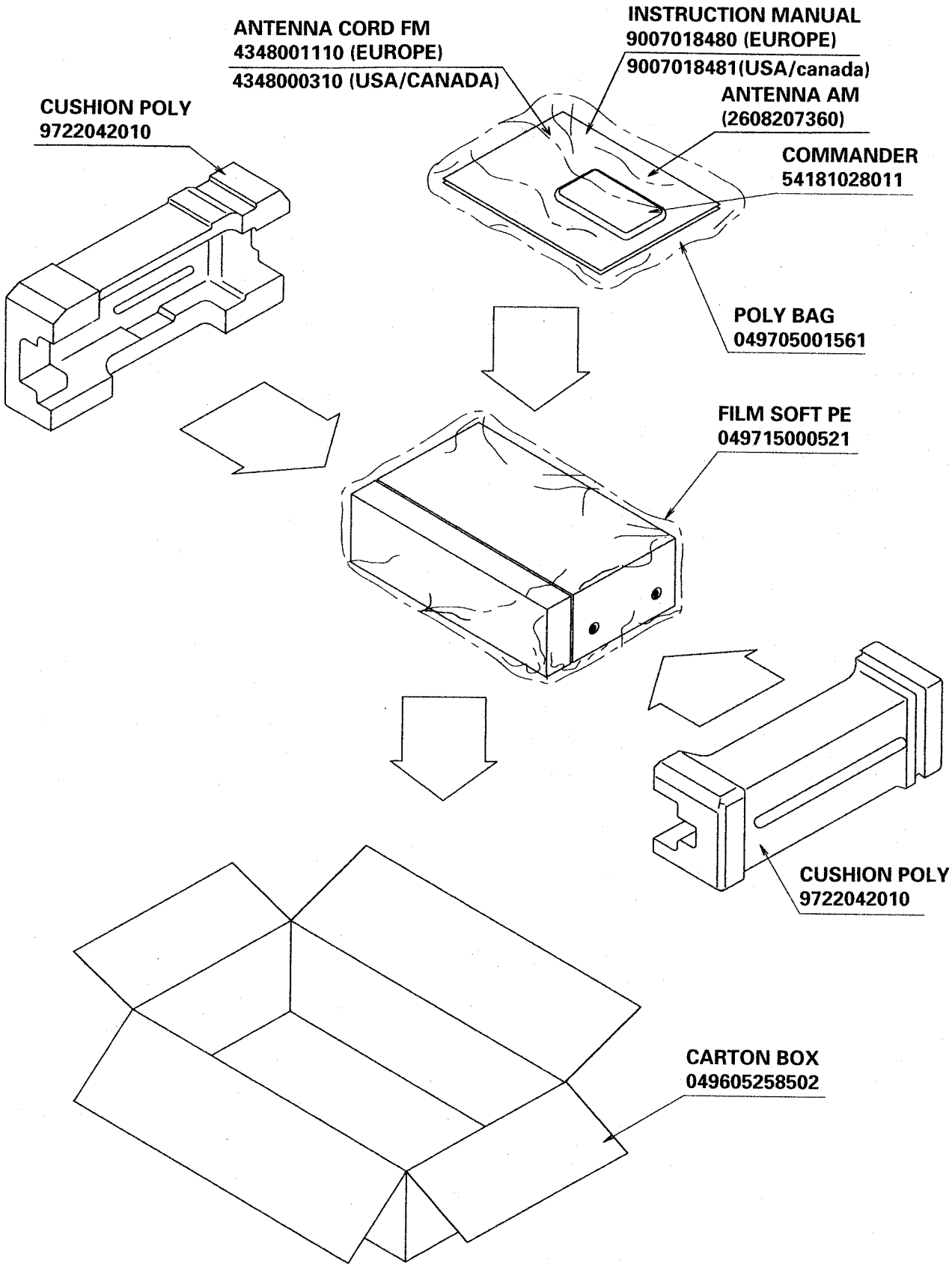
FRONT-END FJH3-505H USA/CANADA VERSION



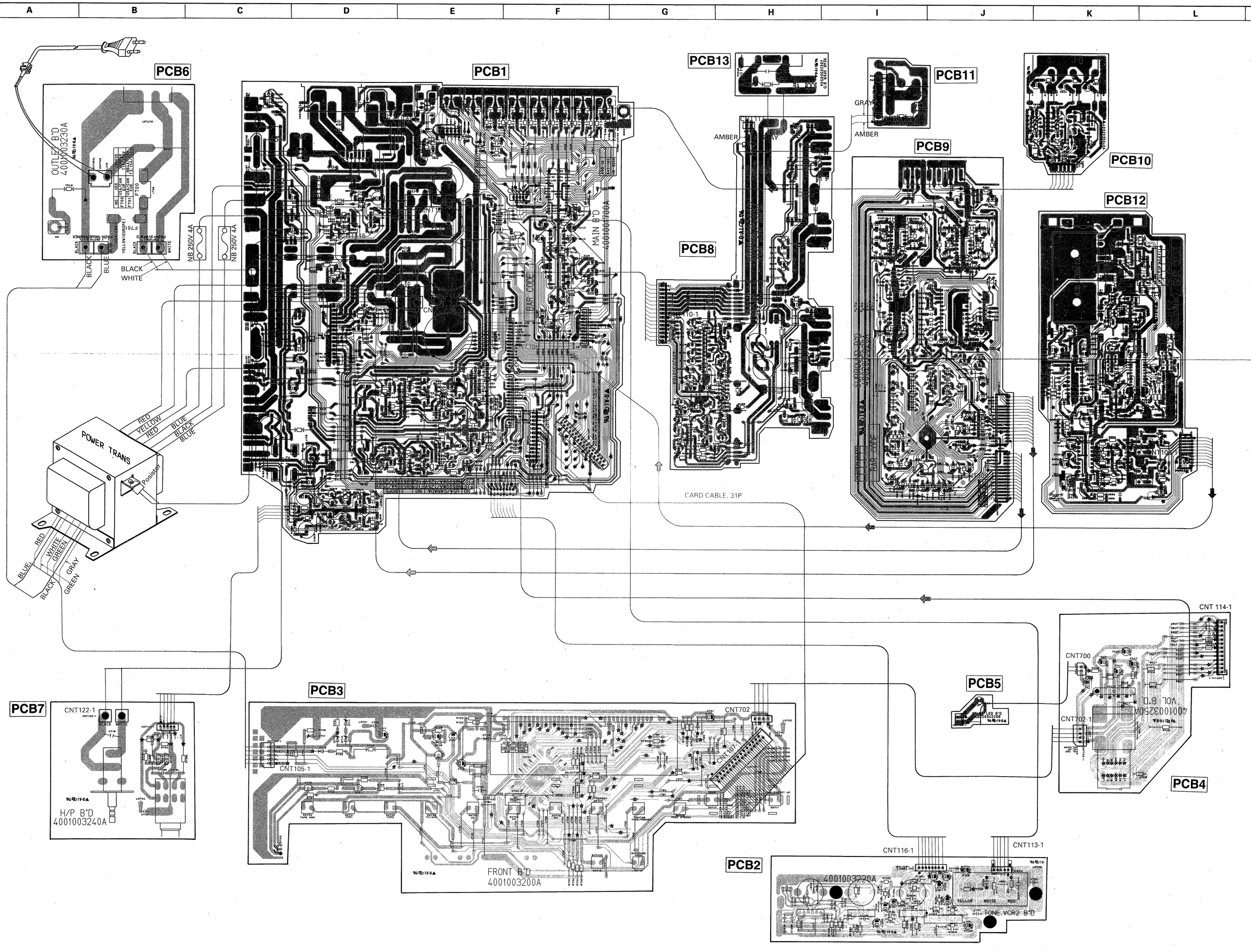
FRONT-END FE407-G60 EUROPE VERSION



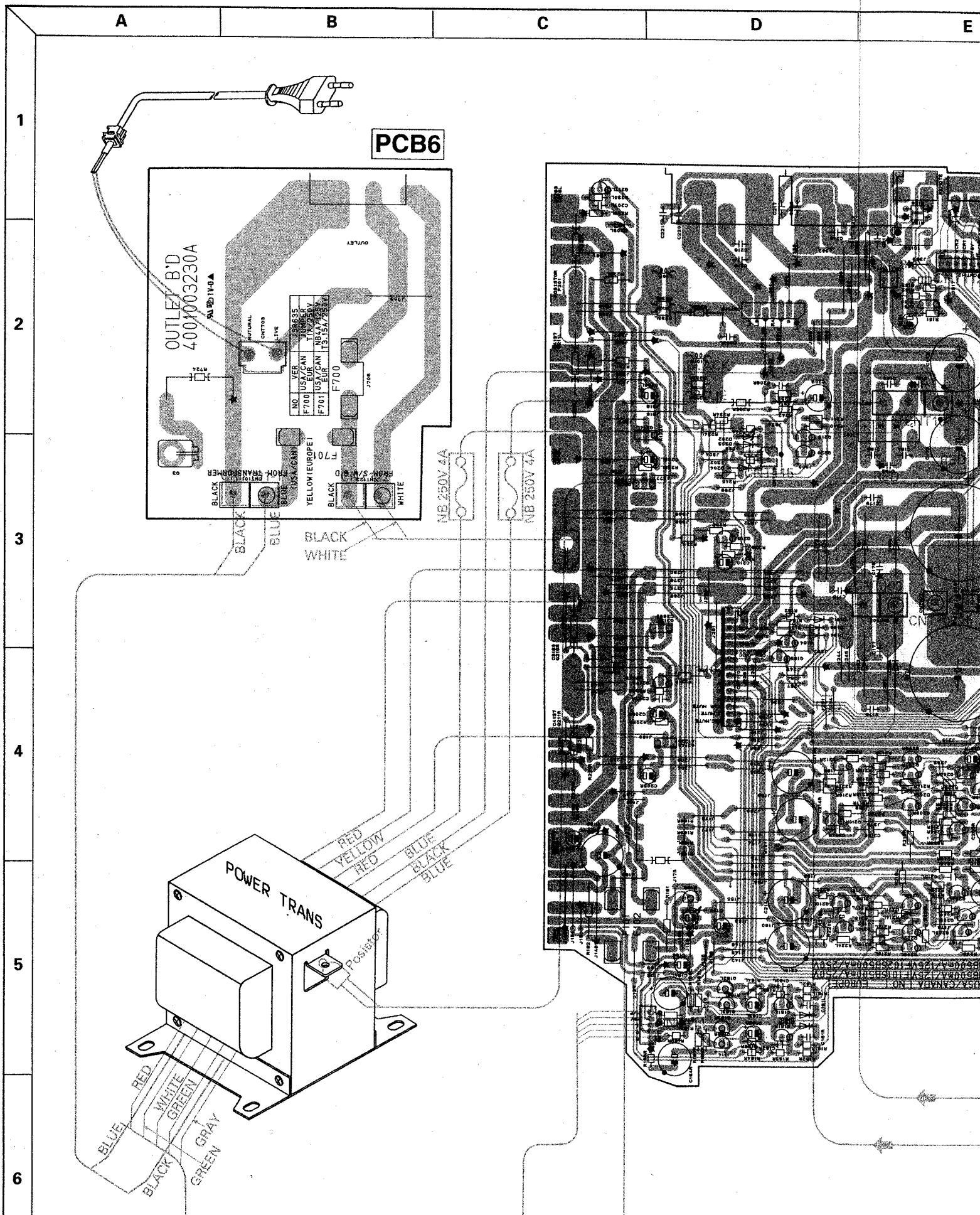
PACKAGE

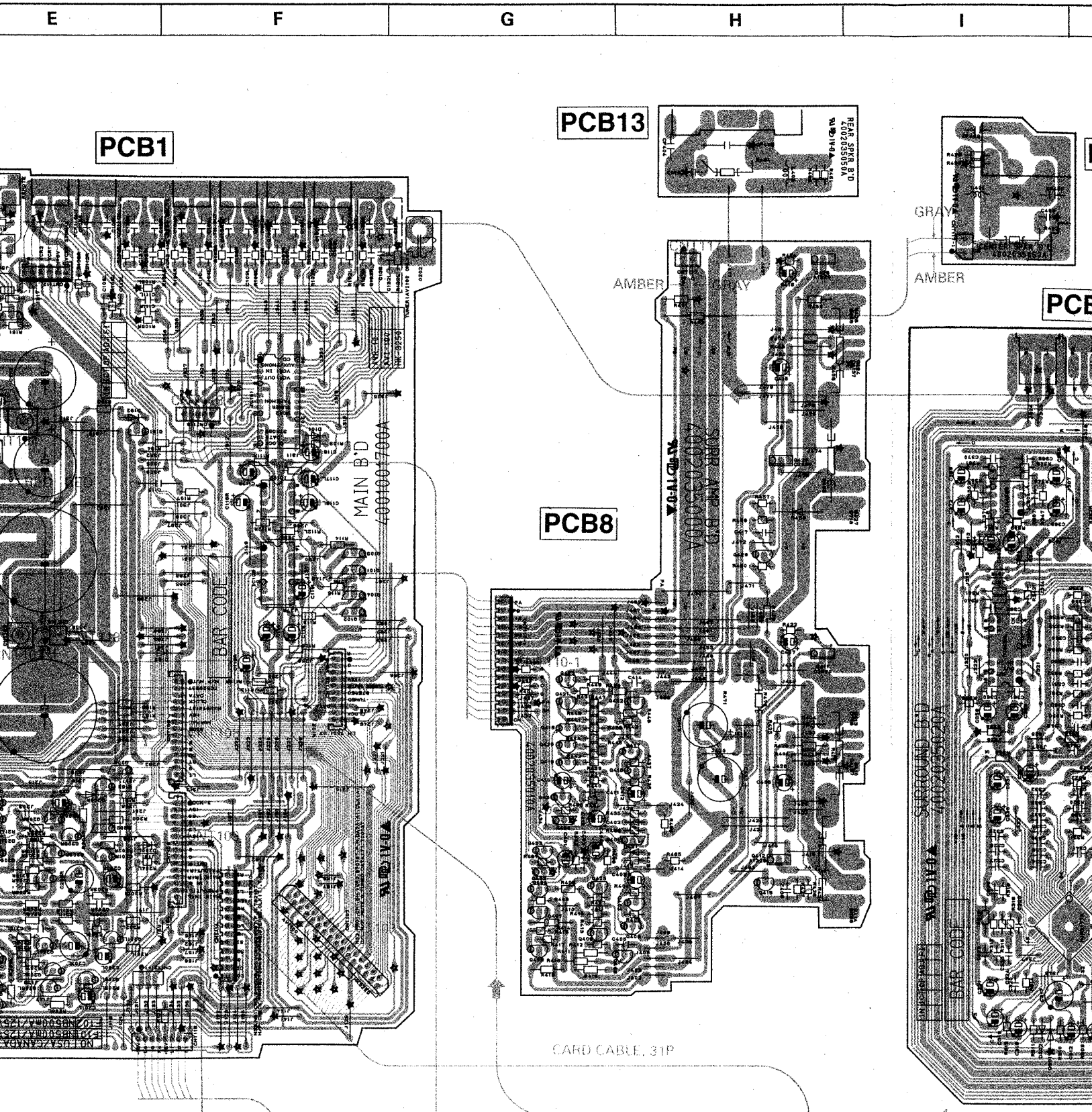

ANTENNA CORD FM
4348001110 (EUROPE)
4348000310 (USA/CANADA)
INSTRUCTION MANUAL
9007018480 (EUROPE)
9007018481(USA/canada)
ANTENNA AM
(2608207360)
CUSHION POLY
9722042010
COMMANDER
54181028011
POLY BAG
049705001561
FILM SOFT PE
049715000521
CUSHION POLY
9722042010
CARTON BOX
049605258502

WIRING DIAGRAM

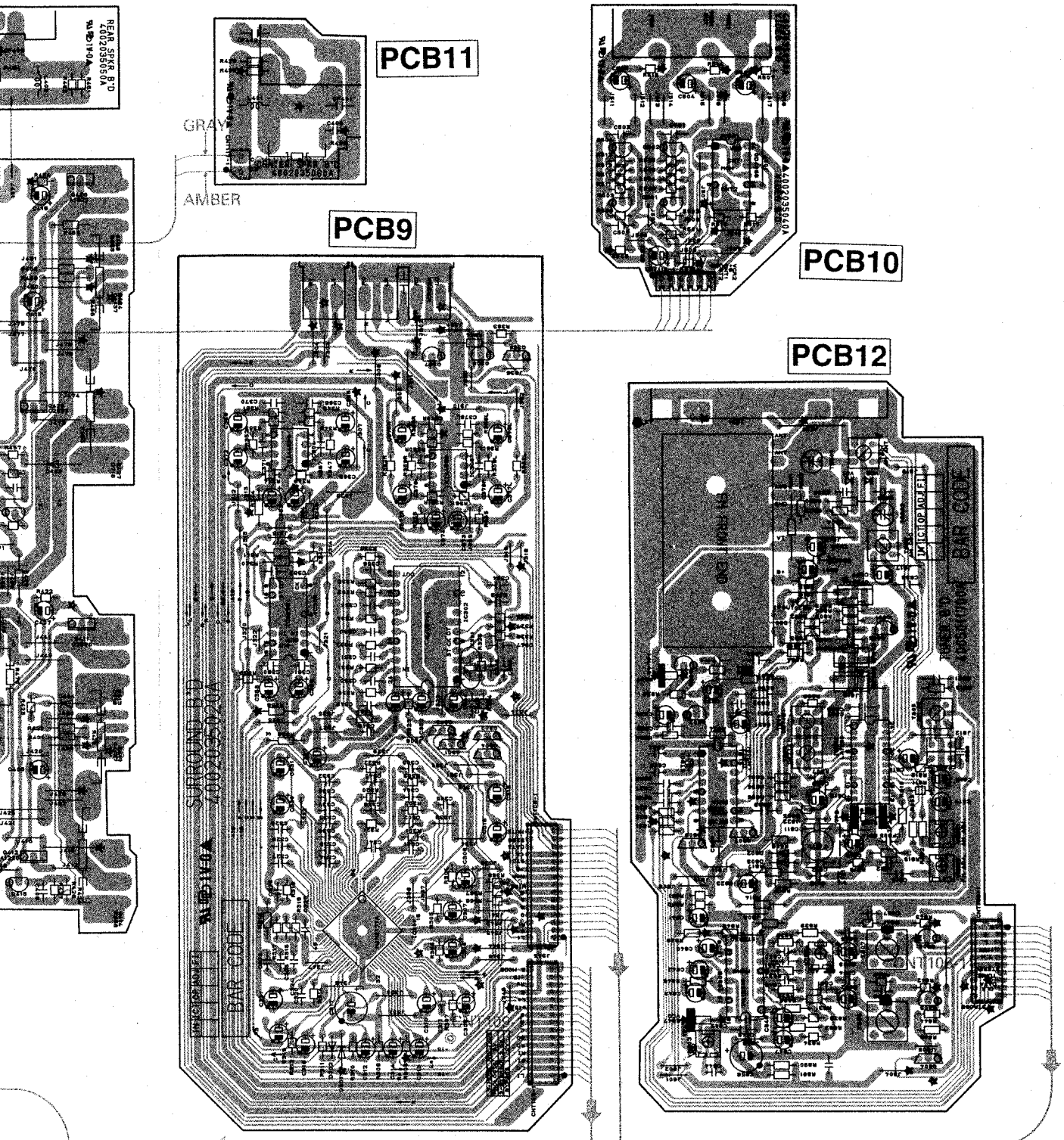


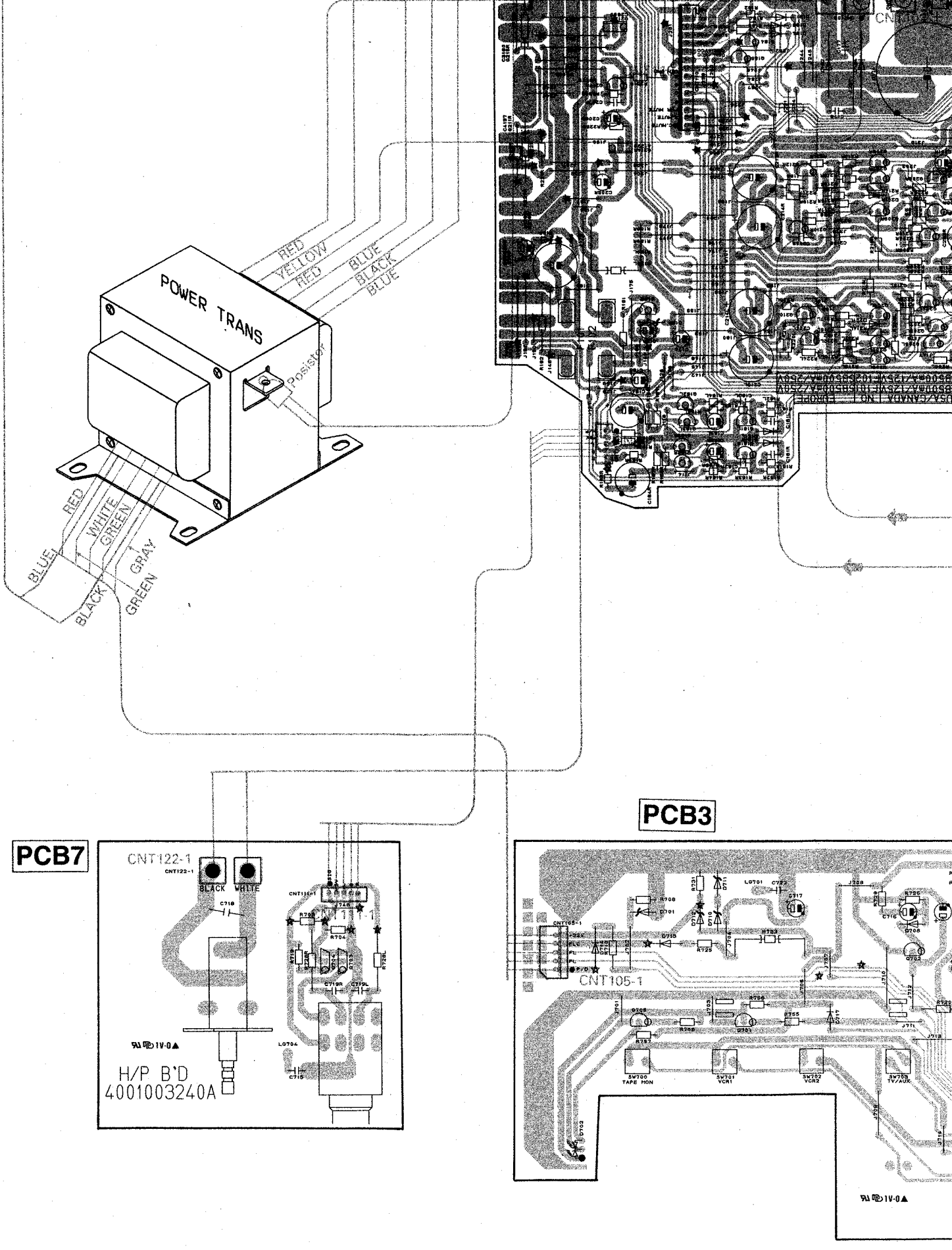
WIRING DIAGRAM




E
F
G
H
I
PCB1
PCB13
PCB8
PCB
MAIN B'D
4001001700A
BAR COD
REAR SPKR B'D
4002035050A
AMBER
GRAY
AMBER
GRAY
SUB AMP B'D
4002035000A
SUB WOOFER B'D
4002035000A
BAR CODE
CARD CABLE, 31P

	I	J	K	L	


PCB11
PCB9
PCB10
PCB12
GRAY
AMBER
REAR SPKR B'D
SURROUND B'D
BAR 606
CNT10K

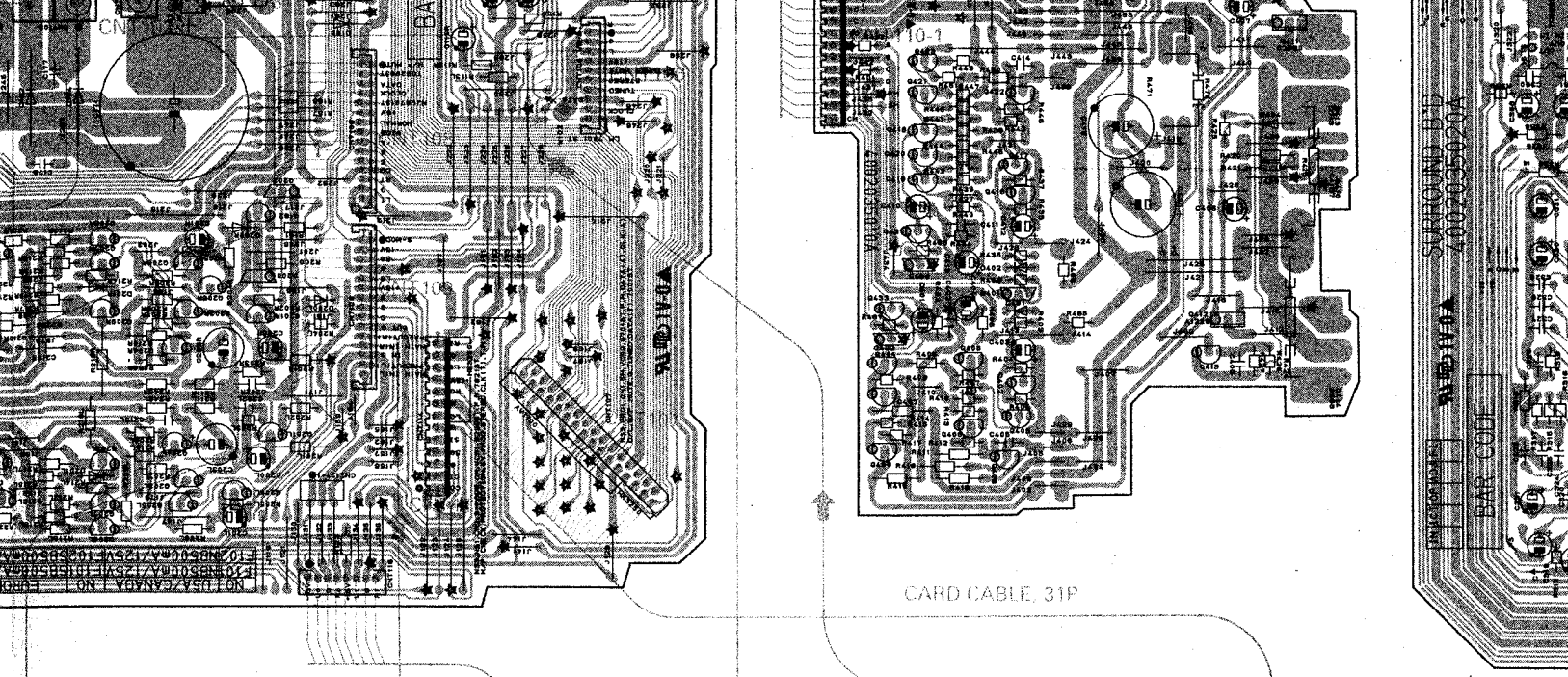

POWER TRANS
Posistor
RED
YELLOW
RED
BLUE
BLACK
BLUE
BLUE
RED
WHITE
GREEN
BLACK
GRAY
GREEN

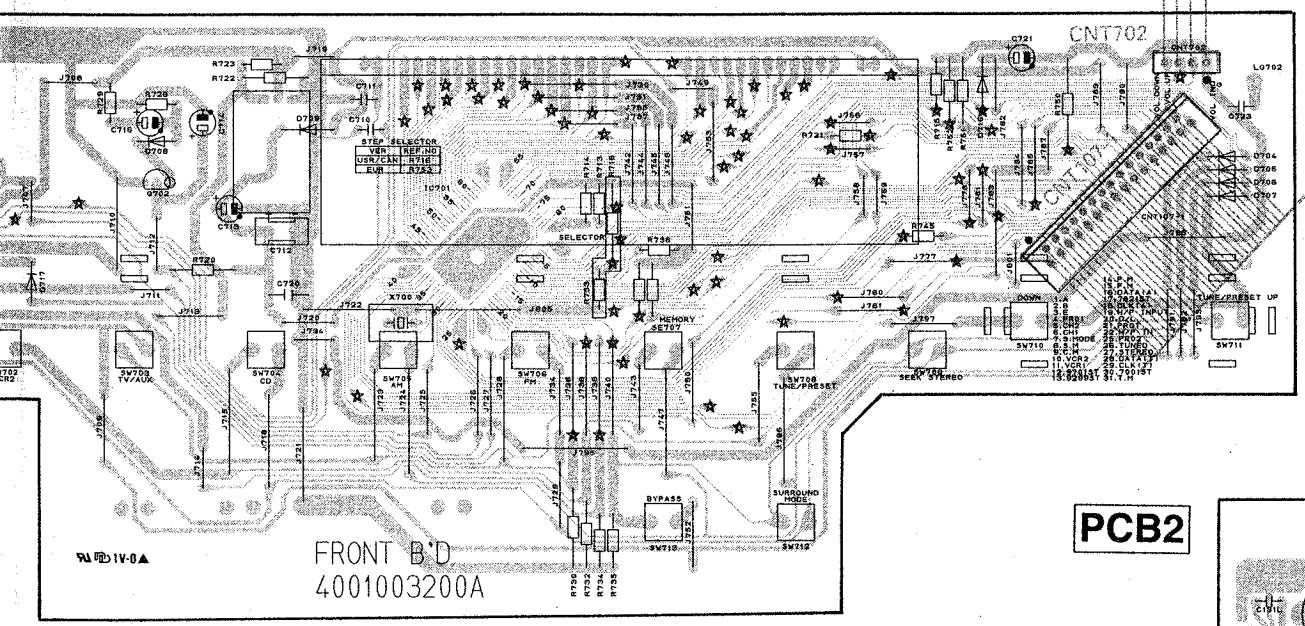
PCB7

CNT122-1
BLACK
WHITE
H/P B'D
4001003240A

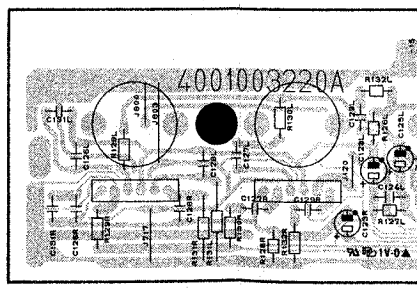
PCB3

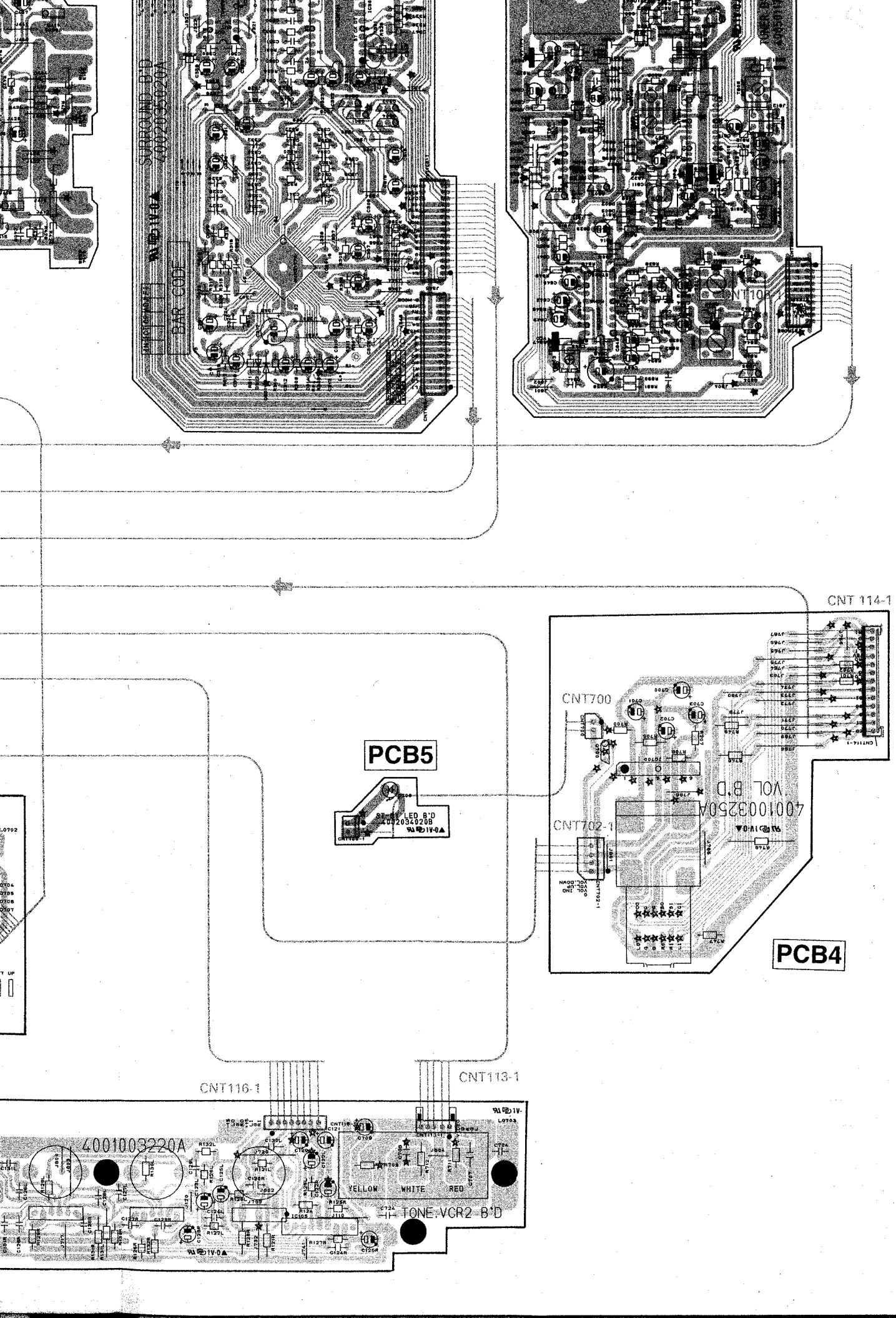
CNT105-1



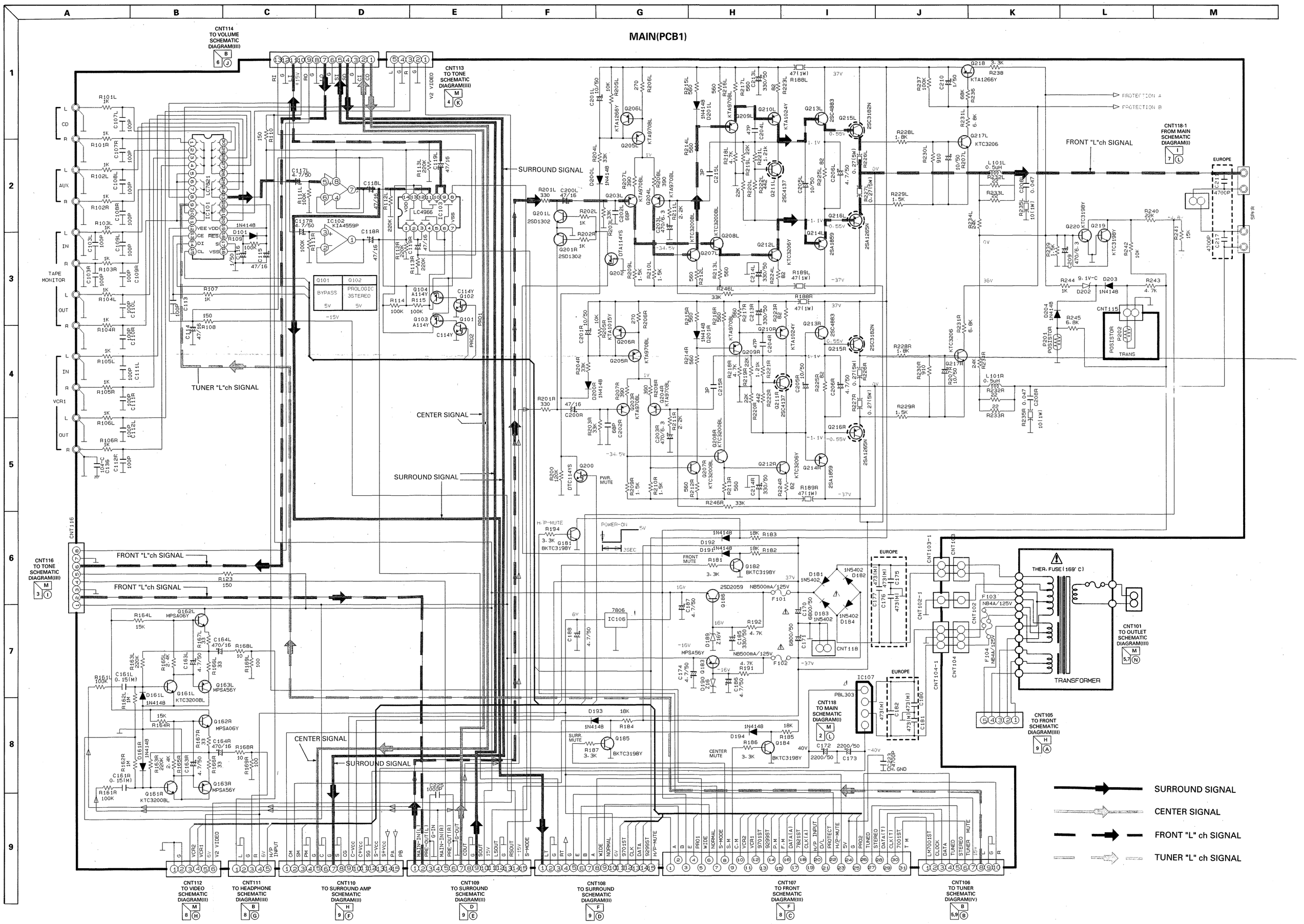


PCB2

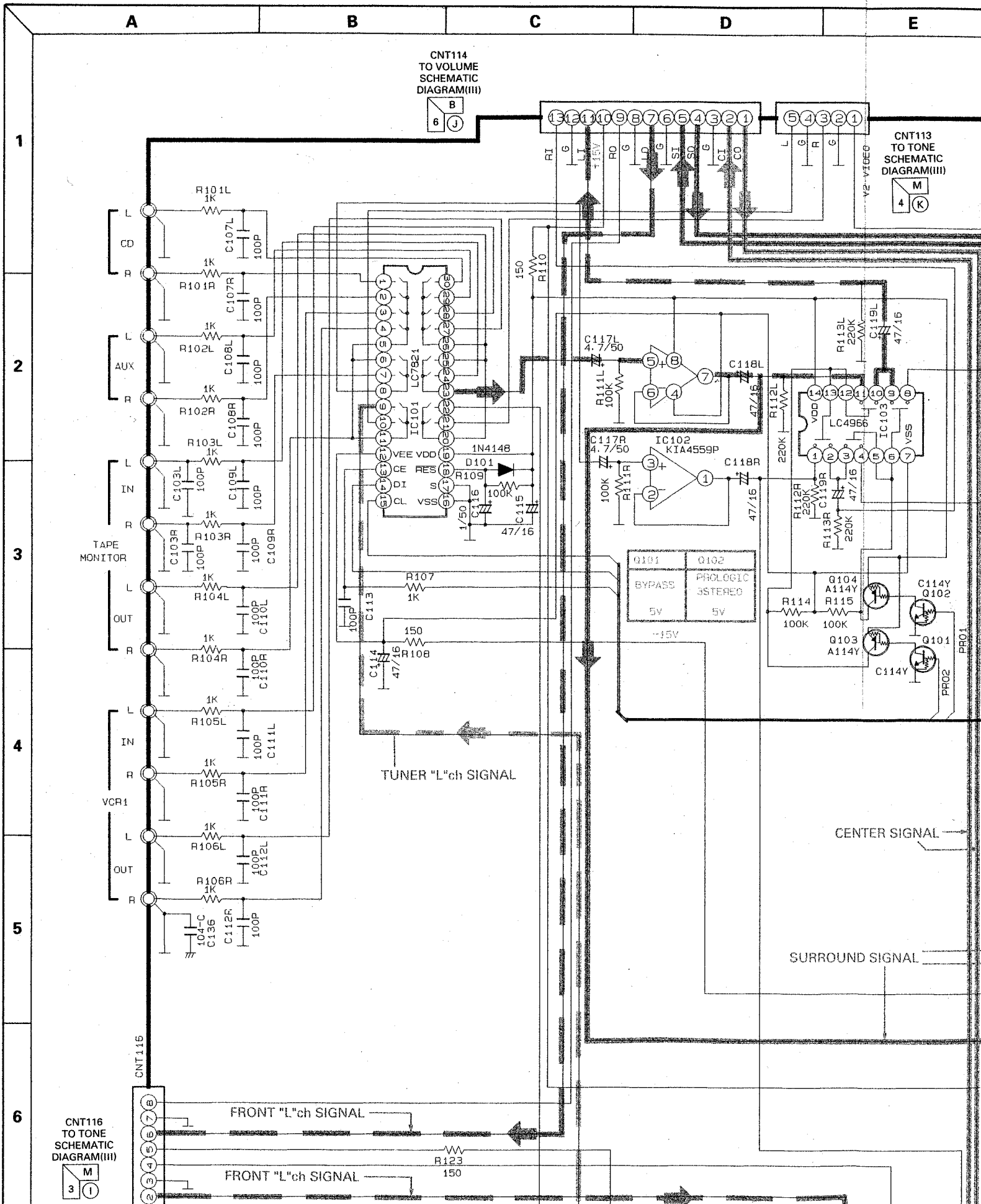



CNT 114-1
CNT700
PCB5
CNT702-1
PCB4
CNT116-1
CNT113-1
4001003220A
YELLOW
WHITE
RED
TONE:VCR2 B'D

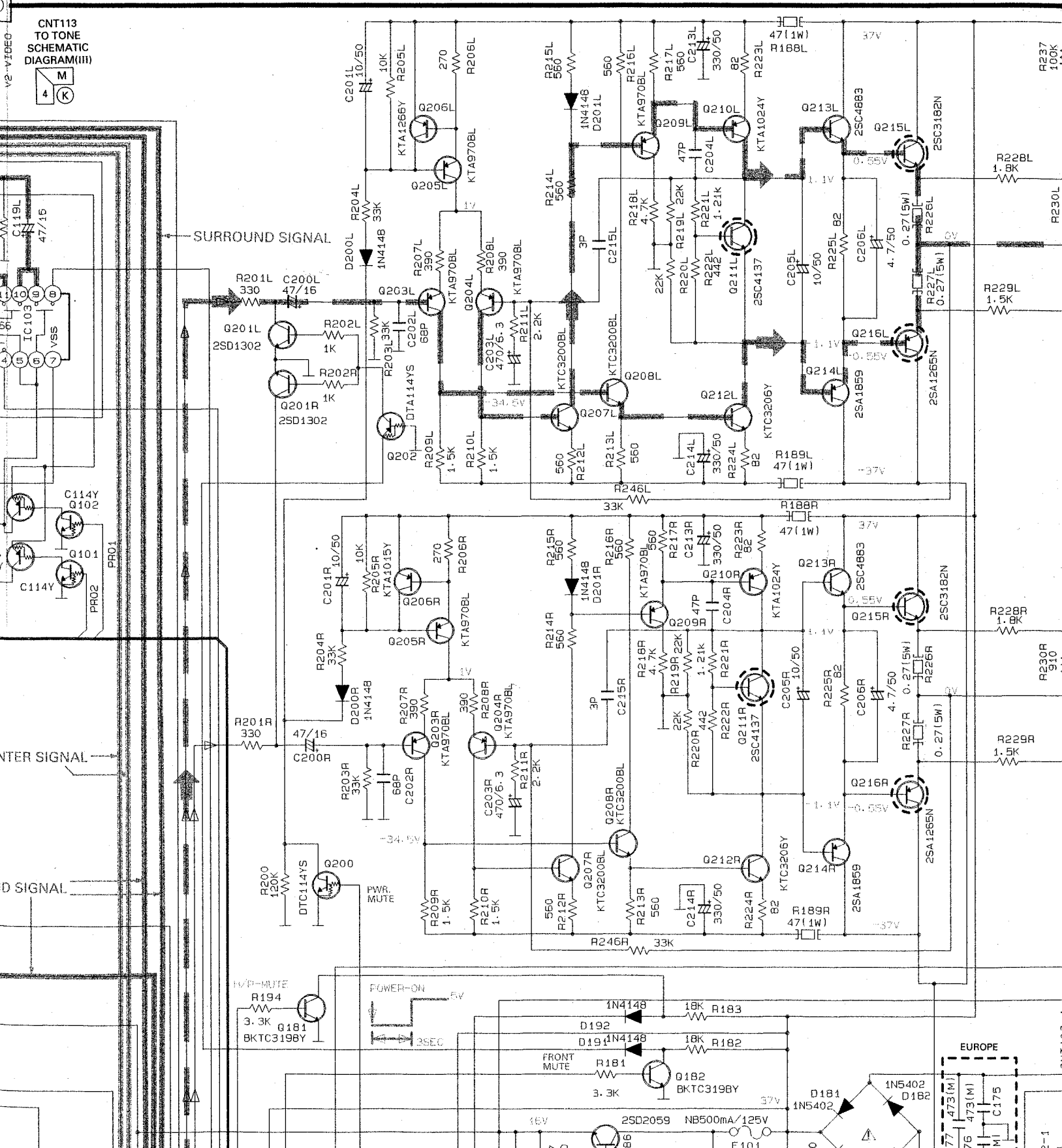
SCHEMATIC DIAGRAM I



SCHEMATIC DIAGRAM I



MAIN(PCB1)


CNT113
TO TONE
SCHEMATIC
DIAGRAM(III)
M
4
K
SURROUND SIGNAL
Q201L
2SD1302
Q201R
2SD1302
Q200
DTA114YS
Q203L
Q204L
Q205L
Q206L
Q207L
Q208L
Q209L
Q210L
Q211L
Q212L
Q213L
Q214L
Q215L
Q216L
Q203R
Q204R
Q205R
Q206R
Q207R
Q208R
Q209R
Q210R
Q211R
Q212R
Q213R
Q214R
Q215R
Q216R
KTA970BL
KTC3200BL
KTC3206Y
KTA1024Y
2SC4883
2SA1859
2SC3182N
2SA1265N
2SC4137
KTA1266Y
KTA1015Y
DTC114YS
1N4148
D200L
D201L
D200R
D201R
R201L 330
R201R 330
C200L 47/16
C200R 47/16
R202L 1K
R202R 1K
R203L 33K
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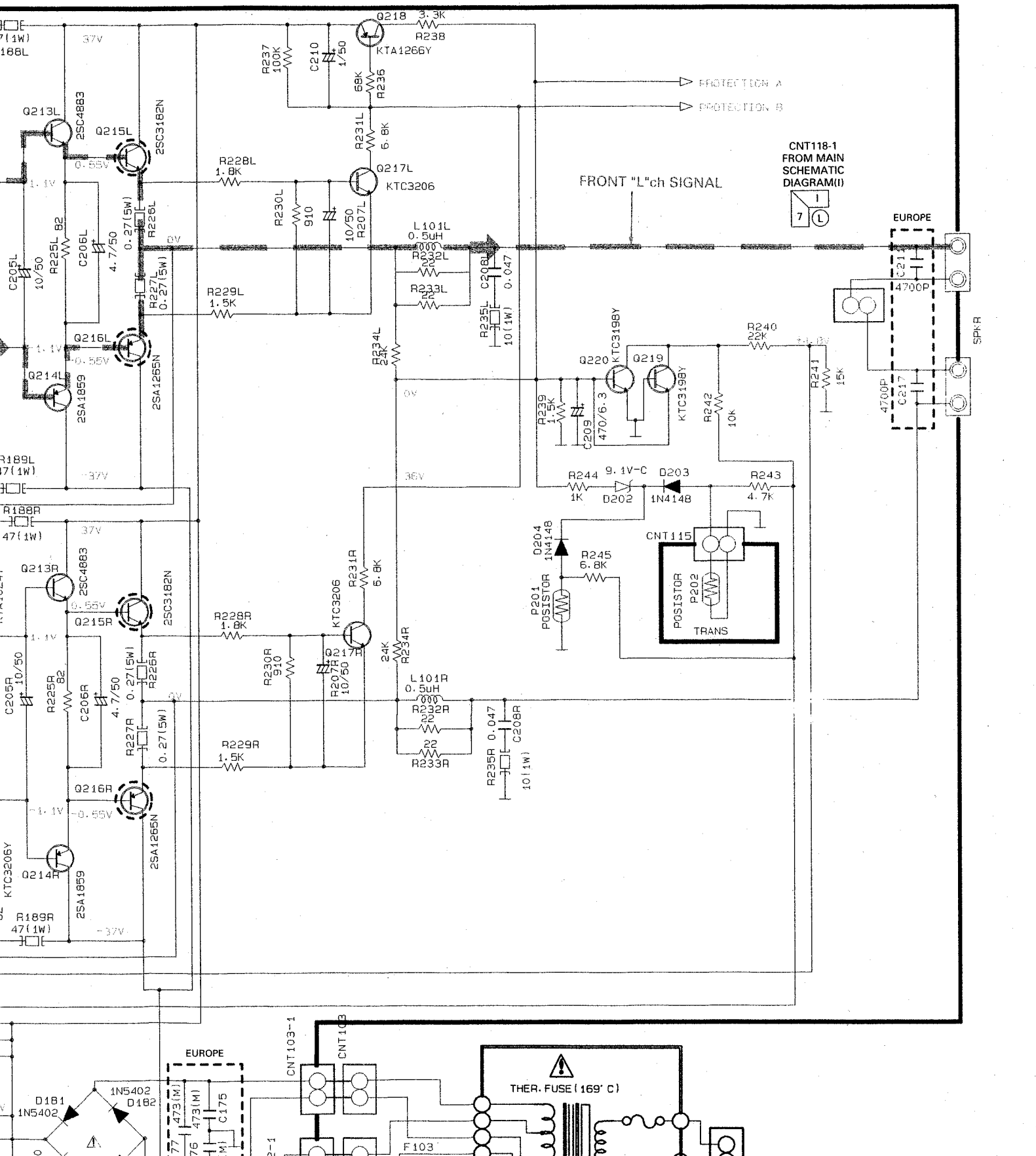
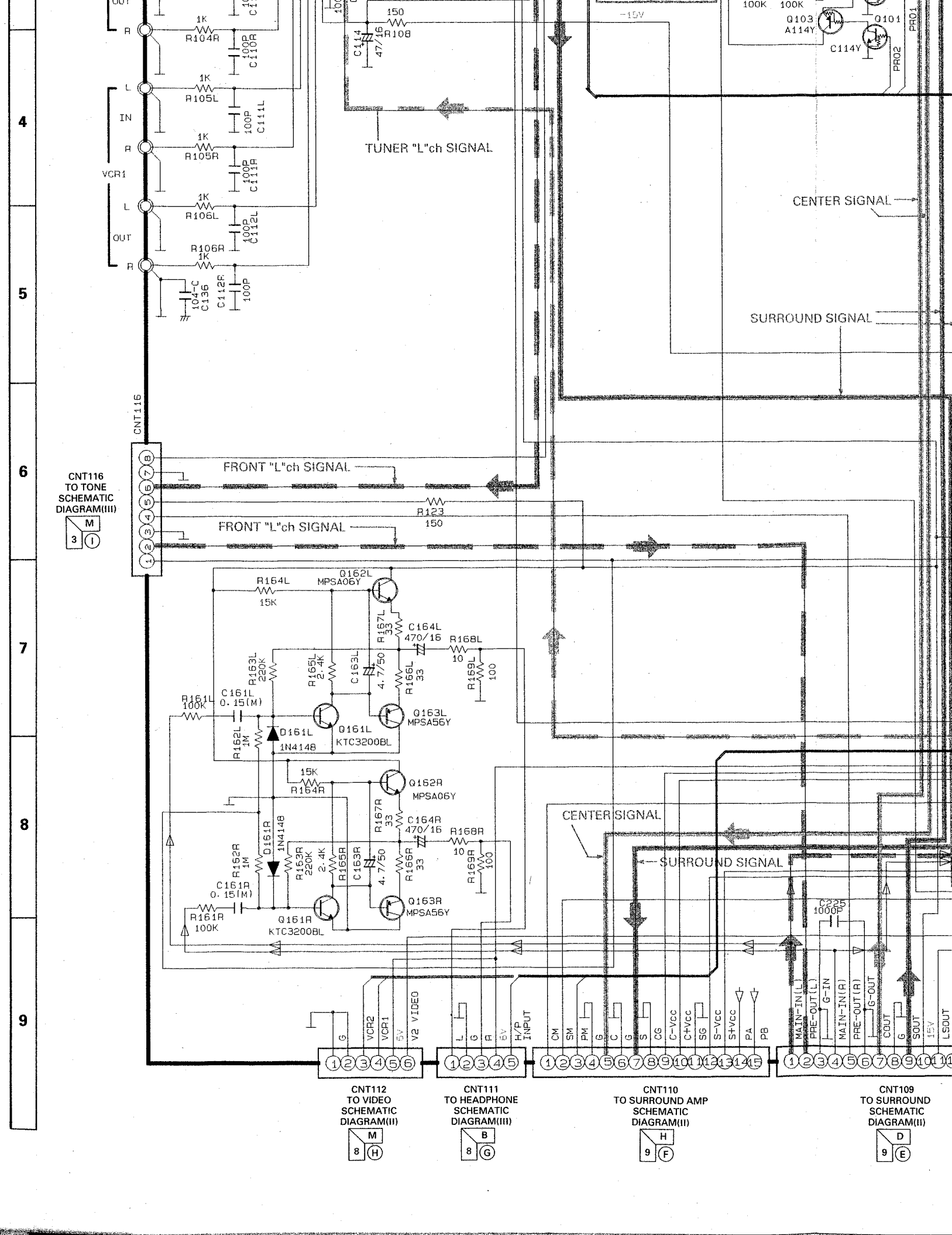
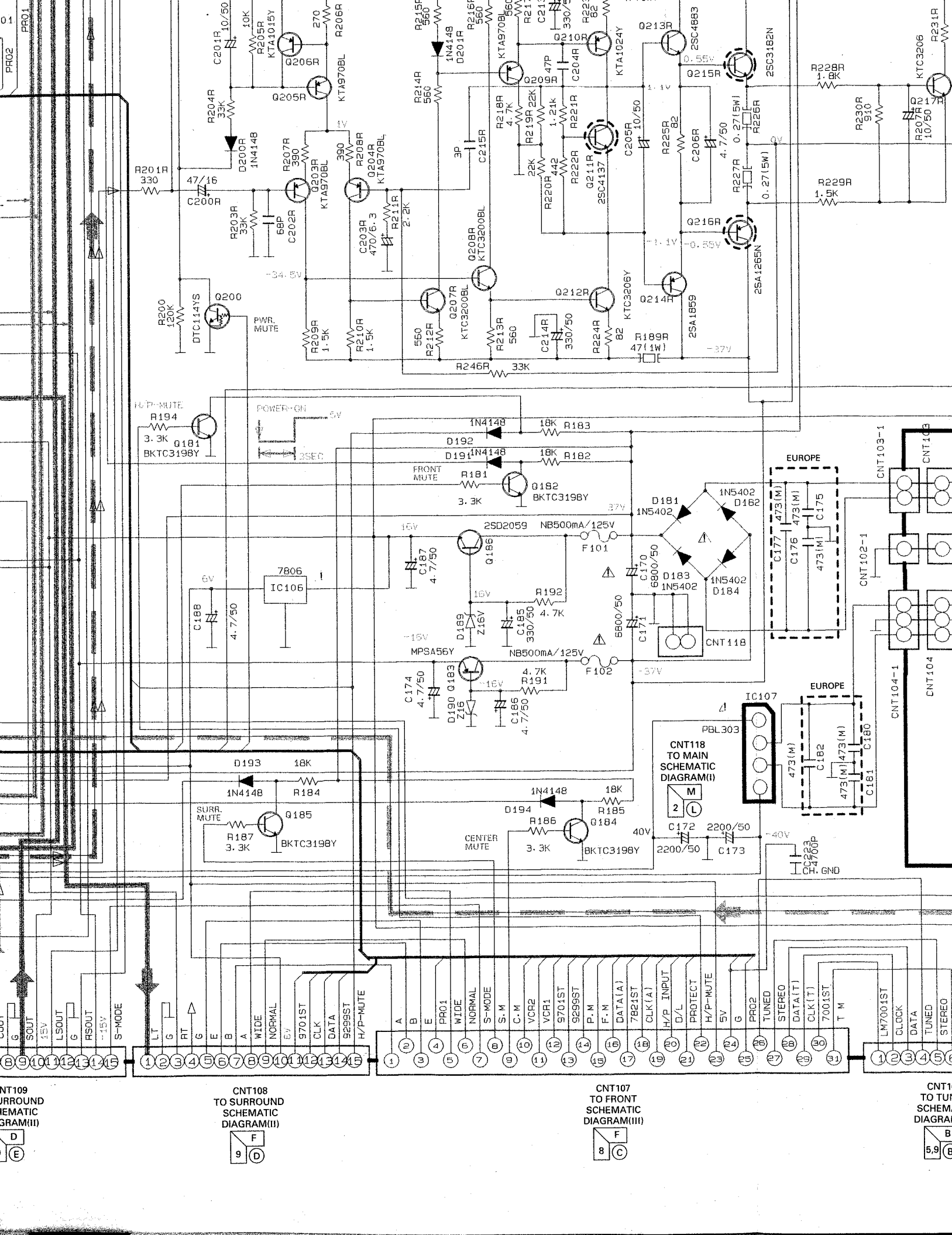
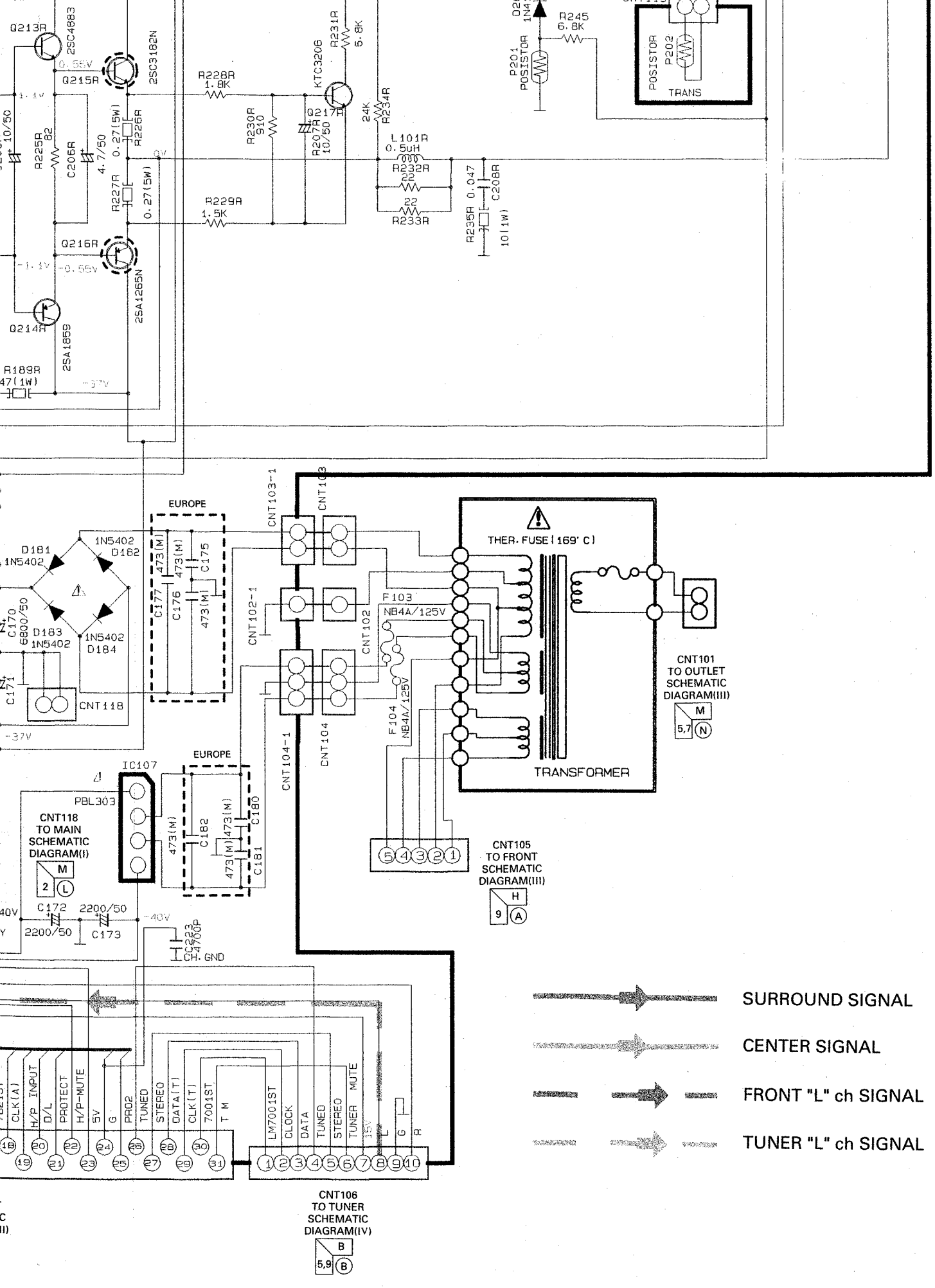
C202L 68P
C202R 68P
C203L 470/6.3
C203R 470/6.3
R204L 33K
R204R 33K
R205L 10K
R205R 10K
C201L 10/50
C201R 10/50
R206L 270
R206R 270
R207L 390
R207R 390
R208L 390
R208R 390
R209L 1.5K
R209R 1.5K
R210L 1.5K
R210R 1.5K
R211L 2.2K
R211R 2.2K
R212L 560
R212R 560
R213L 560
R213R 560
R214L 560
R214R 560
R215L 560
R215R 560
R216L 560
R216R 560
R217L 560
R217R 560
C213L 330/50
C213R 330/50
C214L 330/50
C214R 330/50
R218L 4.7K
R218R 4.7K
R219L 22K
R219R 22K
R220L 22K
R220R 22K
R221L 1.21K
R221R 1.21K
R222L 442
R222R 442
C204L 47P
C204R 47P
C215L 3P
C215R 3P
R223L 82
R223R 82
R224L 82
R224R 82
R225L 82
R225R 82
C205L 10/50
C205R 10/50
C206L 4.7/50
C206R 4.7/50
R226L 0.27(5W)
R226R 0.27(5W)
R227L 0.27(5W)
R227R 0.27(5W)
R228L 1.8K
R228R 1.8K
R229L 1.5K
R229R 1.5K
R230L
R230R 910
R237 100K
R188L 47(1W)
R188R 47(1W)
R189L 47(1W)
R189R 47(1W)
R246L 33K
R246R 33K
R200 120K
PWR. MUTE
-34.5V
37V
-37V
1.1V
-1.1V
0.55V
-0.55V
0V
1V
IC103
VSS
C119L 47/16
C114Y
Q102
Q101
PRO1
PRO2
C114Y
NTER SIGNAL
D SIGNAL
M/P-MUTE
R194 3.3K
Q181 BKTC3198Y
POWER-ON
5V
2SEC
1N4148
D192
D191
R183 18K
R182 18K
FRONT MUTE
R181 3.3K
Q182 BKTC3198Y
EUROPE
D181 1N5402
D182 1N5402
2SD2059
NB500mA/125V
F101
16V
C175 473(M)
C176 473(M)

I	J	K	L	M

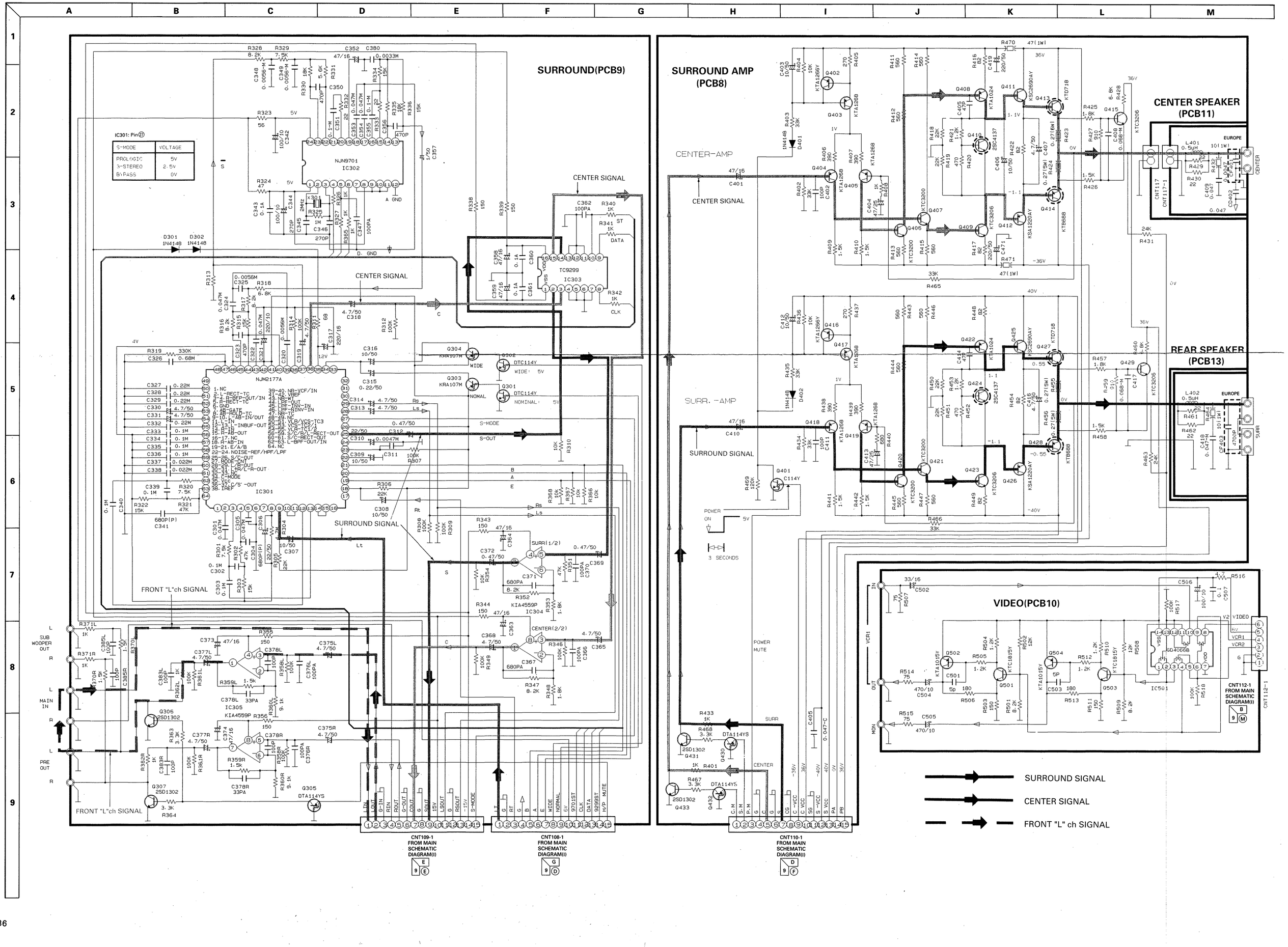

Q218
3.3K
R238
KTA1266Y
R237
100K
C210
1/50
68K
R236
PROTECTION A
PROTECTION B
Q213L
2SC4883
Q215L
2SC3182N
R231L
6.8K
CNT118-1
FROM MAIN
SCHEMATIC
DIAGRAM(I)
R228L
1.8K
Q217L
KTC3206
FRONT "L"ch SIGNAL
R230L
910
10/50
R207L
L101L
0.5uH
EUROPE
R225L 82
C206L
4.7/50
0.27(5W)
R226L
C205L
10/50
R227L
0.27(5W)
R232L
22
C208L
0.047
C214
4700P
R229L
1.5K
R233L
22
R235L
10(1W)
Q216L
2SA1265N
Q214L
2SA1859
R234L
24K
Q220
KTC3198Y
Q219
KTC3198Y
R240
22K
R241
15K
R239
1.5K
C209
470/6.3
R242
10K
C217
4700P
SPKR
R189L
47(1W)
R244
1K
9.1V-C
D202
D203
1N4148
R243
4.7K
R188R
47(1W)
Q213R
2SC4883
Q215R
2SC3182N
R231R
6.8K
KTC3206
D204
1N4148
R245
6.8K
CNT115
P201
POSISTOR
P202
POSISTOR
TRANS
R228R
1.8K
Q217R
R230R
910
R207R
10/50
24K
R234R
L101R
0.5uH
R232R
22
C208R
0.047
R225R
82
C206R
4.7/50
0.27(5W)
R226R
C205R
10/50
R227R
0.27(5W)
R229R
1.5K
R233R
22
R235R
10(1W)
Q216R
2SA1265N
Q214R
2SA1859
KTC3206Y
R189R
47(1W)
EUROPE
CNT103-1
CNT103
THER. FUSE(169°C)
D181
1N5402
D182
1N5402
C175
473(M)
F103


TUNER "L"ch SIGNAL
CENTER SIGNAL
SURROUND SIGNAL
FRONT "L"ch SIGNAL
FRONT "L"ch SIGNAL
CENTER SIGNAL
SURROUND SIGNAL
CNT116
CNT116 TO TONE SCHEMATIC DIAGRAM(III)
CNT112 TO VIDEO SCHEMATIC DIAGRAM(II)
CNT111 TO HEADPHONE SCHEMATIC DIAGRAM(III)
CNT110 TO SURROUND AMP SCHEMATIC DIAGRAM(II)
CNT109 TO SURROUND SCHEMATIC DIAGRAM(II)
R123 150
R164L 15K
Q162L MPSA06Y
C164L 470/16
R168L 10
R169L 100
R167L 33
R165L 2.4K
C163L 4.7/50
R166L 33
R163L 220K
C161L 0.15(M)
R161L 100K
R162L 1M
D161L 1N4148
Q161L KTC3200BL
Q163L MPSA56Y
R164R 15K
Q162R MPSA06Y
C164R 470/16
R168R 10
R169R 100
R167R 33
R165R 2.4K
C163R 4.7/50
R166R 33
R163R 220K
C161R 0.15(M)
R161R 100K
R162R 1M
D161R 1N4148
Q161R KTC3200BL
Q163R MPSA56Y
C225 1000P
R104R 1K
R105L 1K
R105R 1K
R106L 1K
R106R 1K
C110R 100P
C111L 100P
C111R 100P
C112L 100P
C112R 100P
C136 104-C
R108 150
C114 47/16
Q103 A114Y
Q101 C114Y
100K 100K
-15V
PR01
PR02
IN
OUT
VCR1
G VCR2 VCR1 5V V2 VIDEO
L G R 5V H/P INPUT
CM SM PM G C G S CG C-Vcc C+Vcc SG S-Vcc S+Vcc PA PB
MAIN-IN(L) PRE-OUT(L) G-IN MAIN-IN(R) PRE-OUT(R) G-OUT COUT G SOUT 15V LSOUT

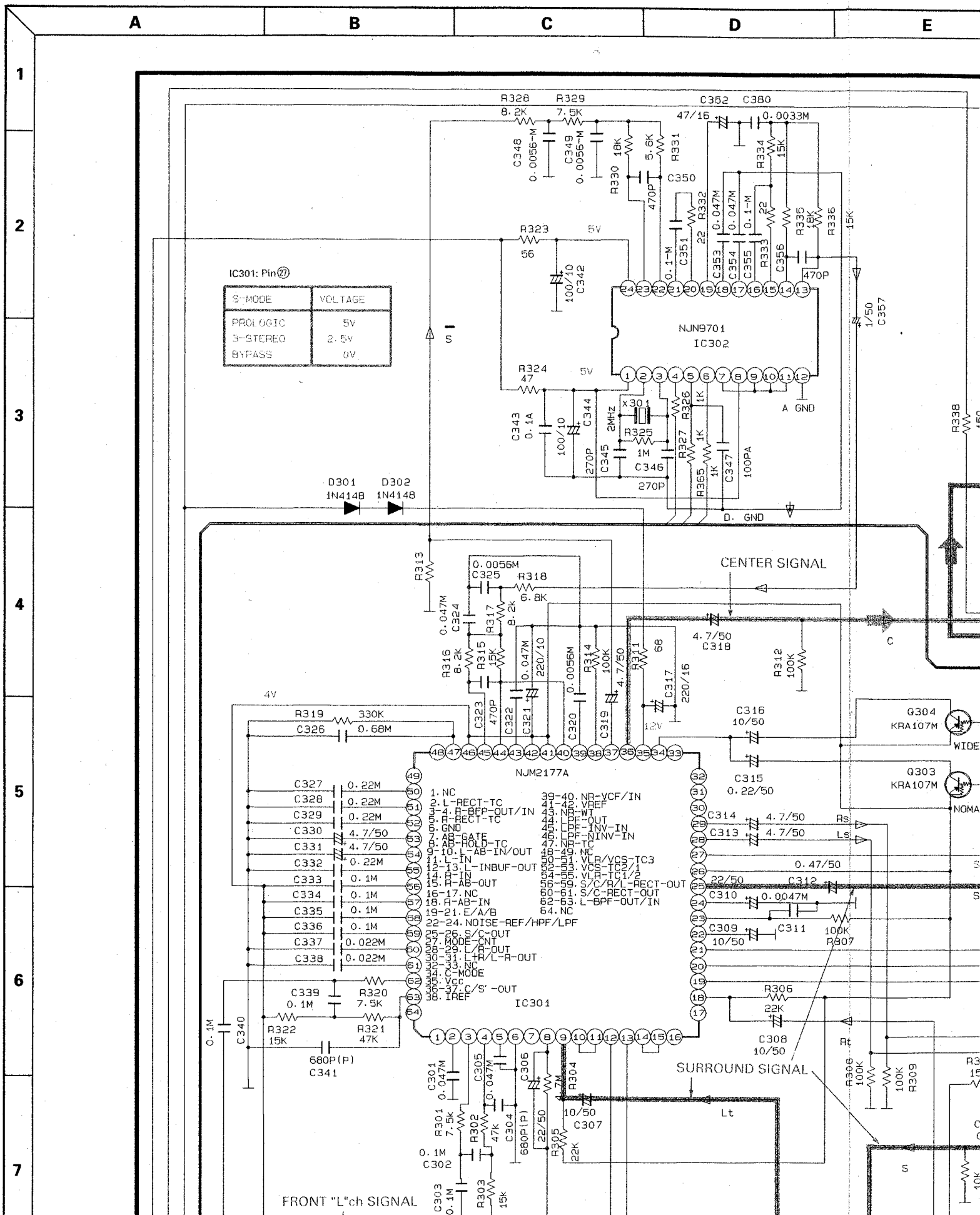

R201R 330
47/16 C200R
Q200 DTC114YS
R200 120K
PWR. MUTE
H/P-MUTE
R194 3.3K
Q181 BKTC3198Y
POWER-ON
5V
2SEC
FRONT MUTE
R181 3.3K
Q182 BKTC3198Y
SURR. MUTE
R187 3.3K
Q185 BKTC3198Y
CENTER MUTE
R186 3.3K
Q184 BKTC3198Y
D192 1N4148
D191 1N4148
D193 1N4148
D194 1N4148
18K R183
18K R182
18K R184
18K R185
D181 1N5402
D162 1N5402
D183 1N5402
D184 1N5402
2SD2059 Q186
NB500mA/125V F101
NB500mA/125V F102
MPSA56Y Q183
7806 IC106
R192 4.7K
R191 4.7K
C187 4.7/50
C188 4.7/50
C185 330/50
C186 4.7/50
C174 4.7/50
C170 6800/50
C171 5800/50
C172 2200/50
C173 2200/50
C177 473(M)
C176 473(M)
C175 473(M)
C182 473(M)
C180 473(M)
C161 473(M)
CNT118
CNT118 TO MAIN SCHEMATIC DIAGRAM(I)
EUROPE
IC107
PBL303
CNT103-1
CNT102-1
CNT104-1
CNT104
CC223 4700P
CH. GND
-37V
-40V
40V
-34.5V
-1.1V
-0.55V
0.55V
1.1V
0V
CNT109 SURROUND SCHEMATIC DIAGRAM(II)
CNT108 TO SURROUND SCHEMATIC DIAGRAM(II)
CNT107 TO FRONT SCHEMATIC DIAGRAM(III)

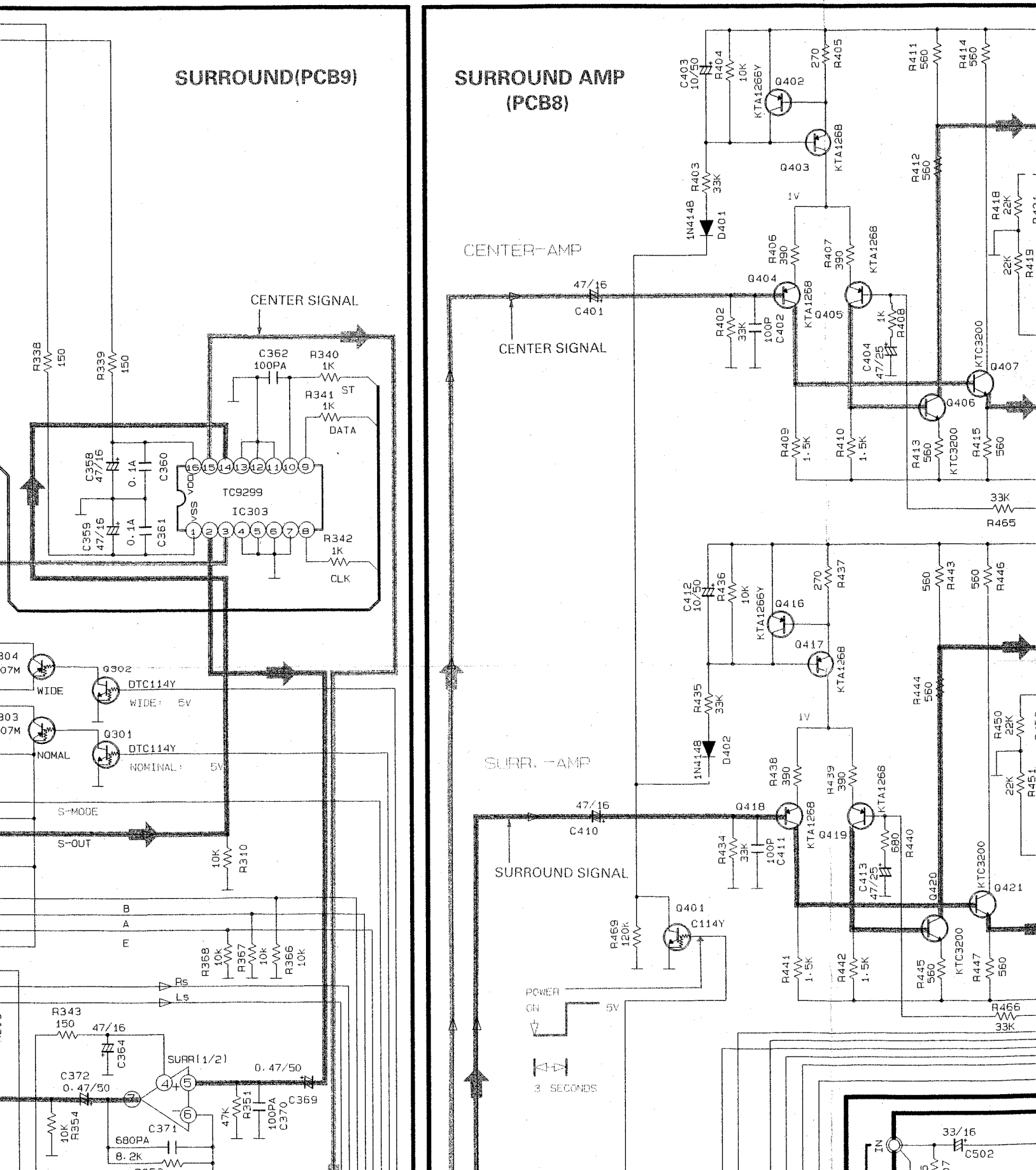

Q213R
2SC4883
Q215R
2SC3182N
R228R
1.8K
KTC3206
R231R
6.8K
R234R
24K
R230R
910
R207R
10/50
L101R
0.5uH
R232R
22
R233R
R235R
0.047
C208R
10(1W)
R245
6.8K
P201
POSISTOR
P202
POSISTOR
TRANS
R225R
82
C205R
4.7/50
R226R
0.27(5W)
R227R
0.27(5W)
Q216R
2SA1265N
Q214R
2SA1859
R189R
47(1W)
-37V
EUROPE
D181
1N5402
D182
1N5402
D183
1N5402
D184
1N5402
C170
6800/50
C171
CNT118
CNT103-1
CNT103
CNT102-1
CNT102
CNT104-1
CNT104
C177
C176
C175
473(M)
F103
NB4A/125V
F104
NB4A/125V
THER. FUSE(169° C)
TRANSFORMER
CNT101
TO OUTLET
SCHEMATIC
DIAGRAM(III)
M
5,7
N
IC107
PBL303
C180
C182
C181
CNT118
TO MAIN
SCHEMATIC
DIAGRAM(I)
M
2
L
C172
2200/50
C173
2200/50
-40V
CC223
4700P
CH. GND
CNT105
TO FRONT
SCHEMATIC
DIAGRAM(III)
H
9
A
CLK(A)
H/P INPUT
D/L
PROTECT
H/P-MUTE
5V
G
PRO2
TUNED
STEREO
DATA(T)
CLK(T)
7001ST
T M
LM7001ST
CLOCK
DATA
TUNED
STEREO
TUNER MUTE
15V
L
G
R
CNT106
TO TUNER
SCHEMATIC
DIAGRAM(IV)
B
5,9
B
SURROUND SIGNAL
CENTER SIGNAL
FRONT "L" ch SIGNAL
TUNER "L" ch SIGNAL

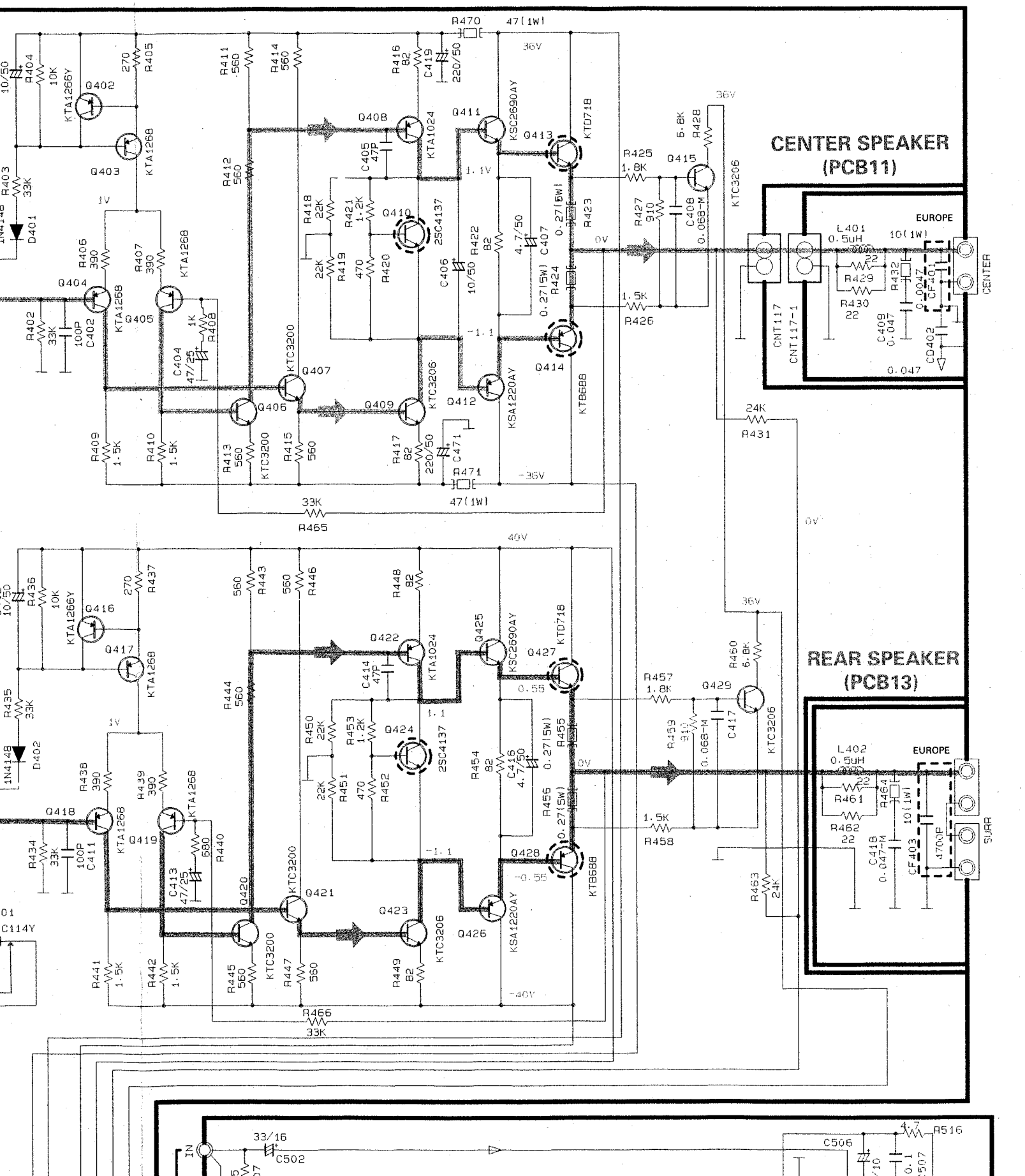
SCHEMATIC DIAGRAM II

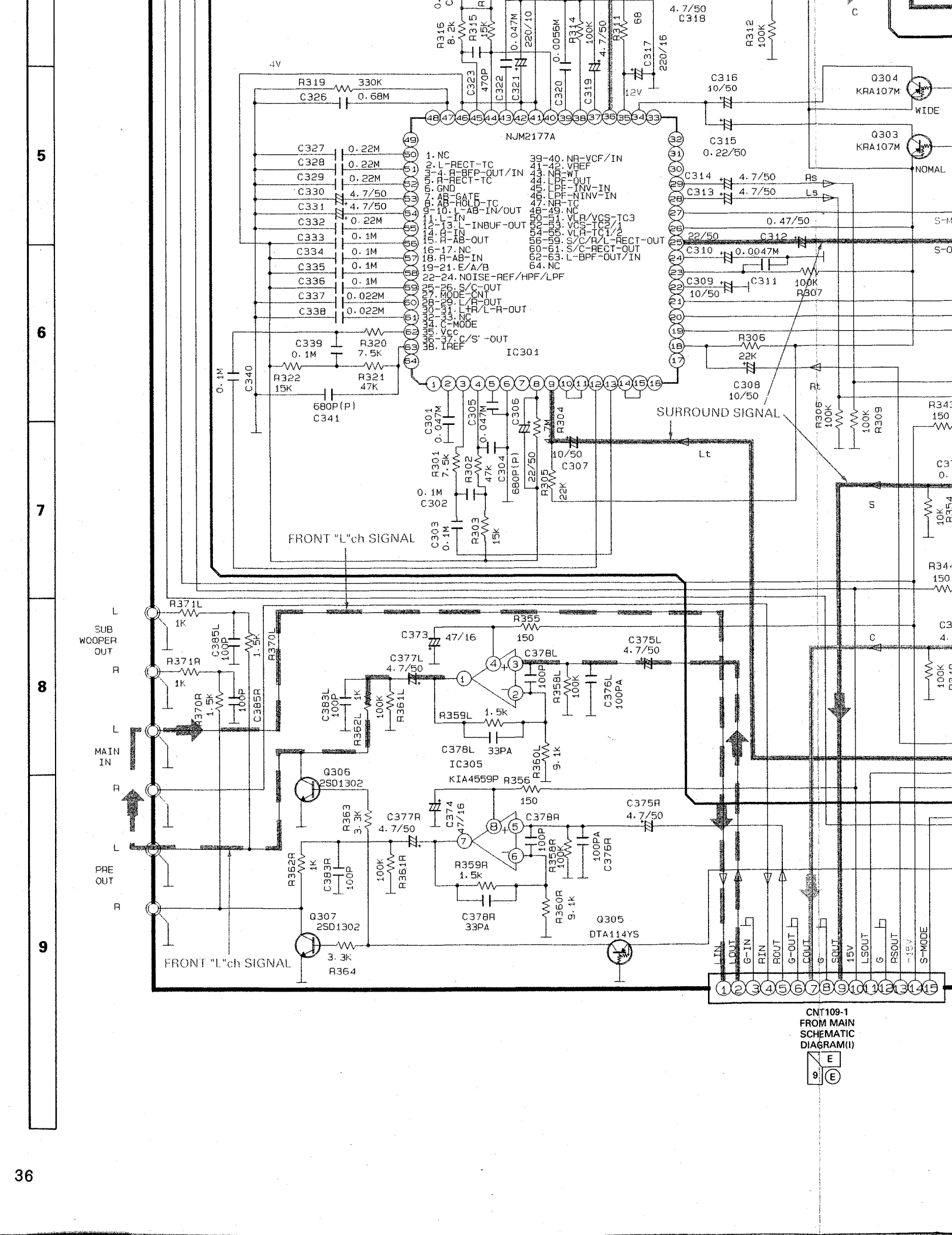


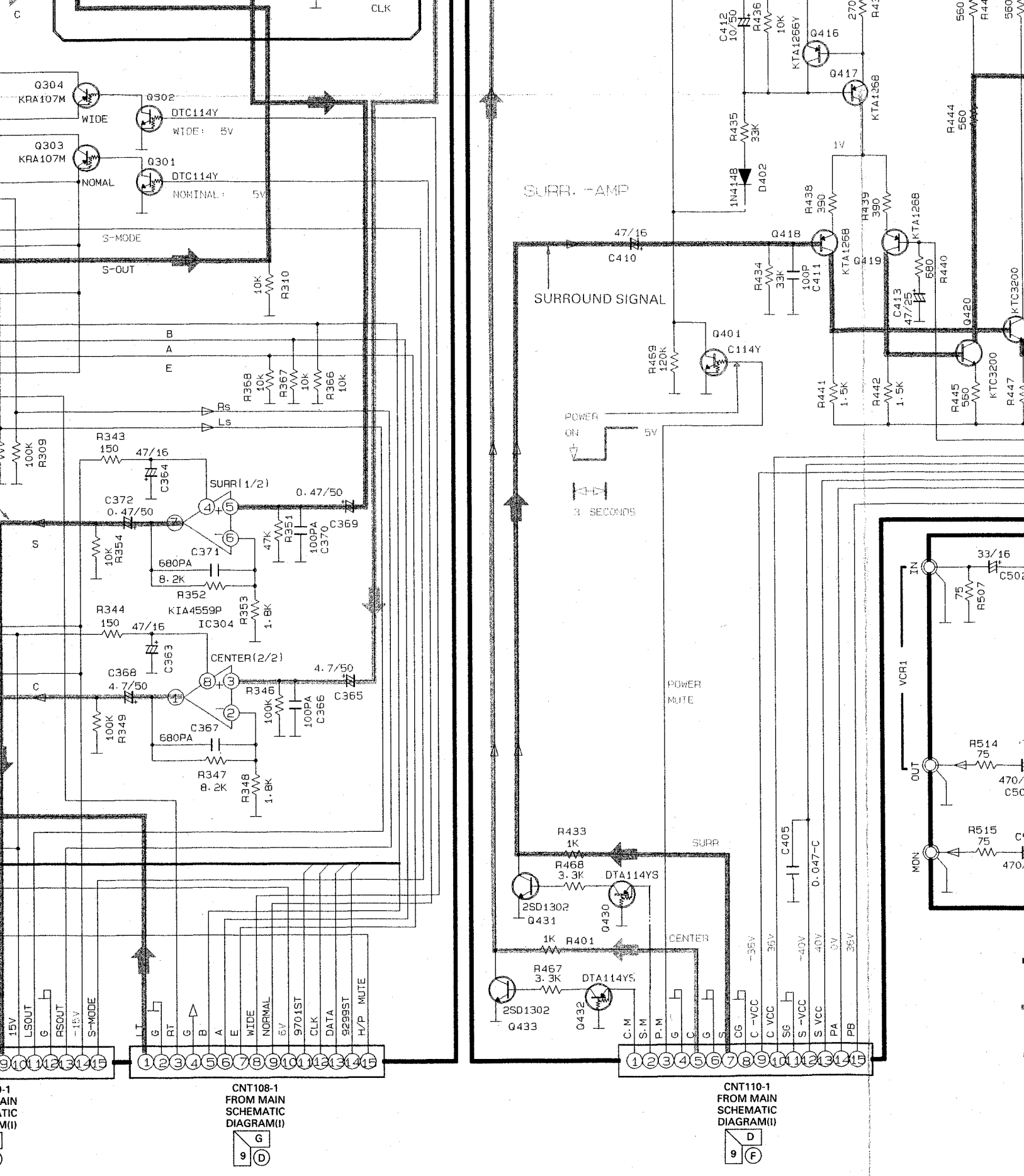
SCHEMATIC DIAGRAM II

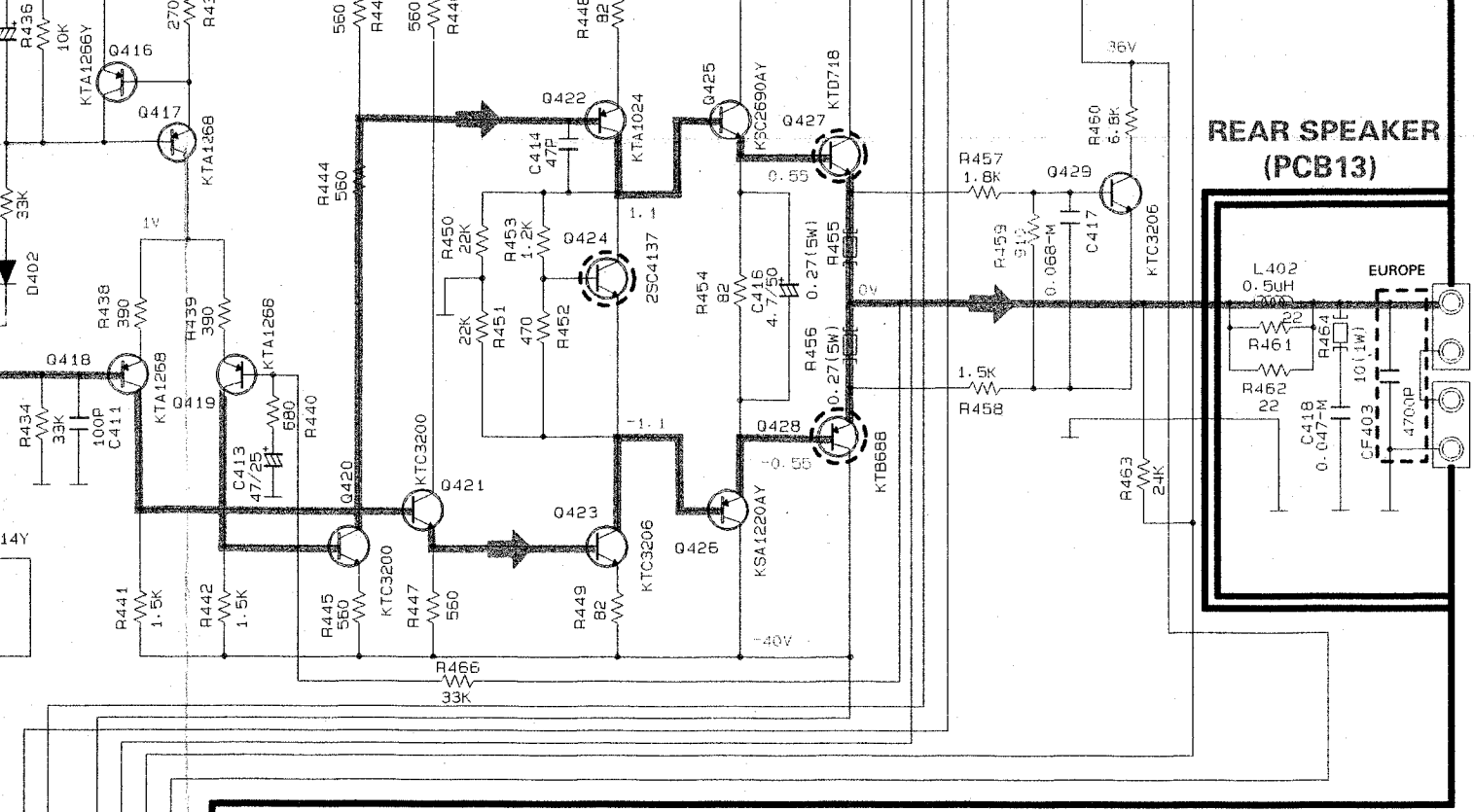


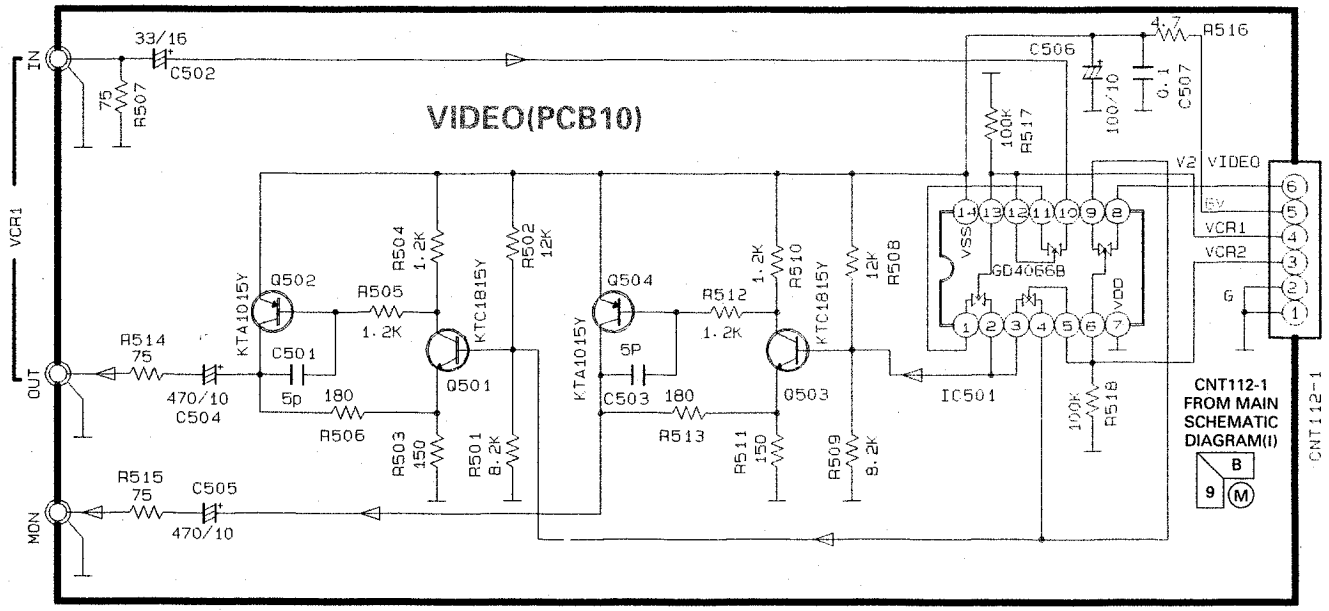

SURROUND(PCB9)
SURROUND AMP
(PCB8)
CENTER SIGNAL
CENTER-AMP
SURR.-AMP
SURROUND SIGNAL
TC9299
IC303
WIDE
NOMAL
S-MODE
S-OUT
DTC114Y
KTA1266Y
KTA1268
KTC3200
C114Y
1N4148
POWER
ON
5V
3 SECONDS
ST
DATA
CLK
Rs
Ls
SURR(1/2)

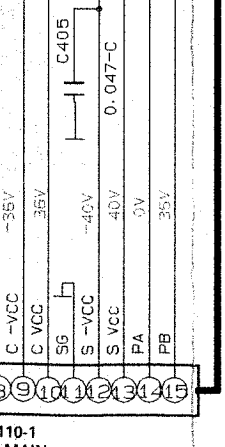

CENTER SPEAKER
(PCB11)
REAR SPEAKER
(PCB13)
EUROPE
CENTER
SUAR
Q402
KTA1266Y
Q403
KTA1268
Q404
Q405
Q406
Q407
KTC3200
Q408
KTA1024
Q409
Q410
2SC4137
Q411
KSC2690AY
Q412
KSA1220AY
Q413
KTD718
Q414
KTB688
Q415
KTC3206
Q416
Q417
Q418
Q419
Q420
Q421
Q422
Q423
Q424
Q425
Q426
Q427
Q428
Q429
R470 47(1W)
R471 47(1W)
R425 1.8K
R426 1.5K
R427 910
R428 6.8K
R431 24K
R465 33K
R466 33K
R457 1.8K
R458 1.5K
R459 910
R460 6.8K
R463 24K
L401 0.5uH
L402 0.5uH
CF401
CF403 470DP
C419 220/50
C471 220/50
C408 0.068-M
C409 0.047
C417 0.068-M
C418 0.047-M
CD402 0.047
CNT117
CNT117-1
36V
1V
0V
-1.1
1.1
-36V
40V
0.55
-0.55
-40V


NJM2177A
IC301
SURROUND SIGNAL
FRONT "L"ch SIGNAL
FRONT "L"ch SIGNAL
IC305
KIA4559P
Q306 2SD1302
Q307 2SD1302
Q305 DTA114YS
Q304 KRA107M
WIDE
Q303 KRA107M
NOMAL
SUB WOOPER OUT
MAIN IN
PRE OUT
CNT109-1 FROM MAIN SCHEMATIC DIAGRAM(I)


Q304
KRA107M
WIDE
Q302
DTC114Y
WIDE: 5V
Q303
KRA107M
NOMAL
Q301
DTC114Y
NOMINAL: 5V
S-MODE
S-OUT
R310
10K
B
A
E
R368 10k
R367 10k
R366 10k
Rs
Ls
R343 150
47/16
C364
SURR(1/2)
C372 0.47/50
0.47/50
R354 10K
C371
680PA
8.2K
R352
R351 47K
C370 100PA
C369
R353 1.8K
R344 150
47/16
C363
KIA4559P
IC304
CENTER(2/2)
C368 4.7/50
4.7/50
R346
C365
R349 100K
C366 100PA
C367
680PA
8.2K
R347
R348 1.8K
R309 100K
15V
LSOUT
G
RSOUT
-15V
S-MODE
LT
G
RT
G
B
A
E
WIDE
NORMAL
6V
9701ST
CLK
DATA
9299ST
H/P MUTE
CNT108-1
FROM MAIN
SCHEMATIC
DIAGRAM(I)
G
9
D
C412 10/50
R436 10K
KTA1266Y
Q416
Q417
KTA1268
R435 33K
1N4148
D402
1V
SURR. -AMP
R438 390
R439 390
47/16
C410
Q418
KTA1268
Q419
KTA1268
R434 33K
100P
C411
R440 680
C413 47/25
SURROUND SIGNAL
Q420
KTC3200
Q401
C114Y
R459 120K
R441 1.5K
R442 1.5K
R445 560
KTC3200
R447
POWER
ON
5V
3 SECONDS
POWER
MUTE
R433 1K
SURR
R468 3.3K
DTA114YS
2SD1302
Q431
Q430
C405
0.047-C
1K R401
CENTER
R467 3.3K
DTA114YS
2SD1302
Q433
Q432
C.M
S.M
P.M
G
G
G
S
CG
C -VCC
C VCC
SG
S -VCC
S VCC
PA
PB
-35V
35V
-40V
40V
0V
35V
CNT110-1
FROM MAIN
SCHEMATIC
DIAGRAM(I)
D
9
F
IN
33/16
C502
75
R507
VCR1
OUT
R514 75
470/
C50
MON
R515 75
470/





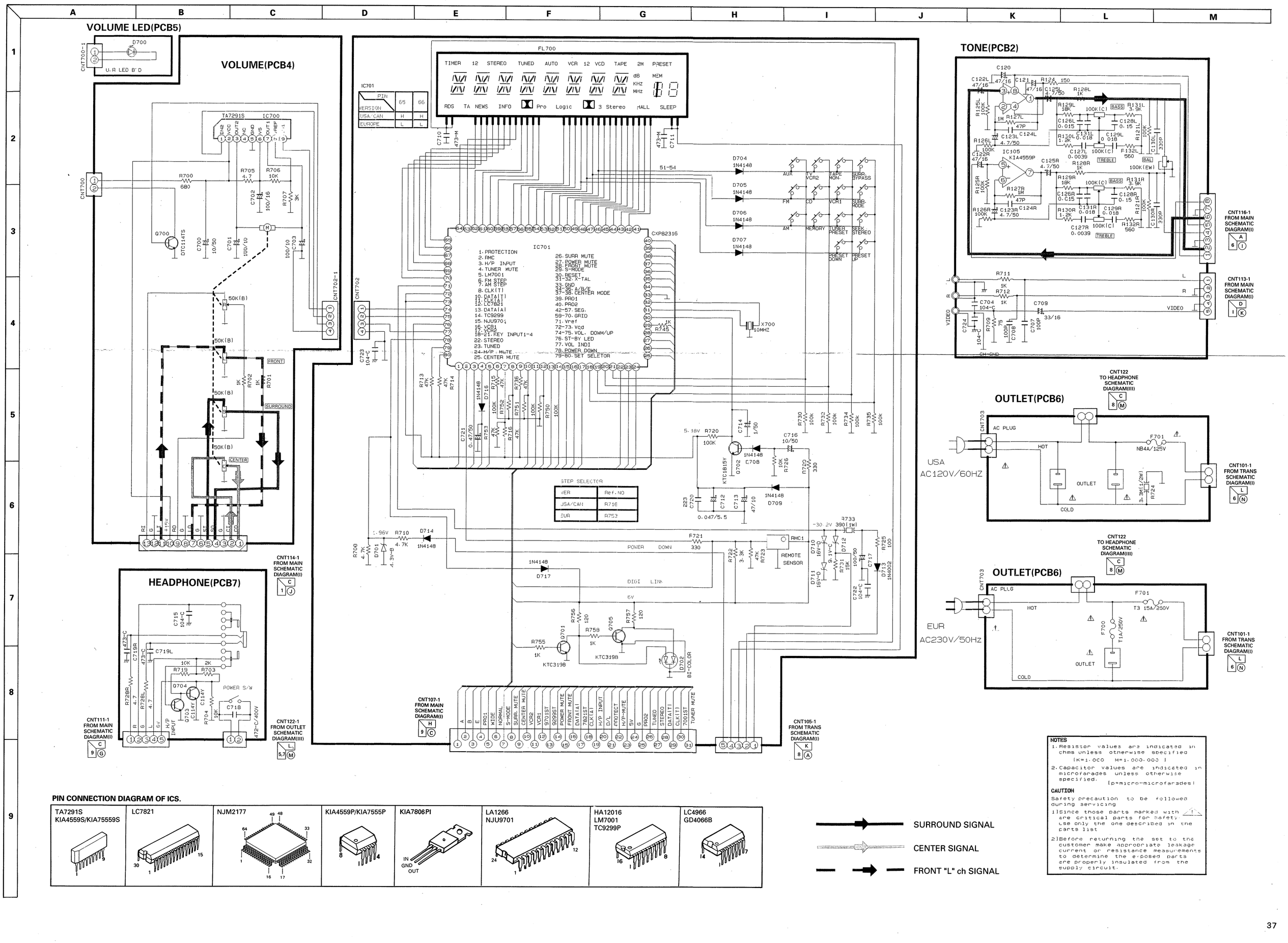


SURROUND SIGNAL

CENTER SIGNAL

FRONT "L" ch SIGNAL

SCHEMATIC DIAGRAM III



NOTES

1. Resistor values are indicated in ohms unless otherwise specified (K=1,000 M=1,000,000)
2. Capacitor values are indicated in microfarades unless otherwise specified. (p=micro-microfarades)

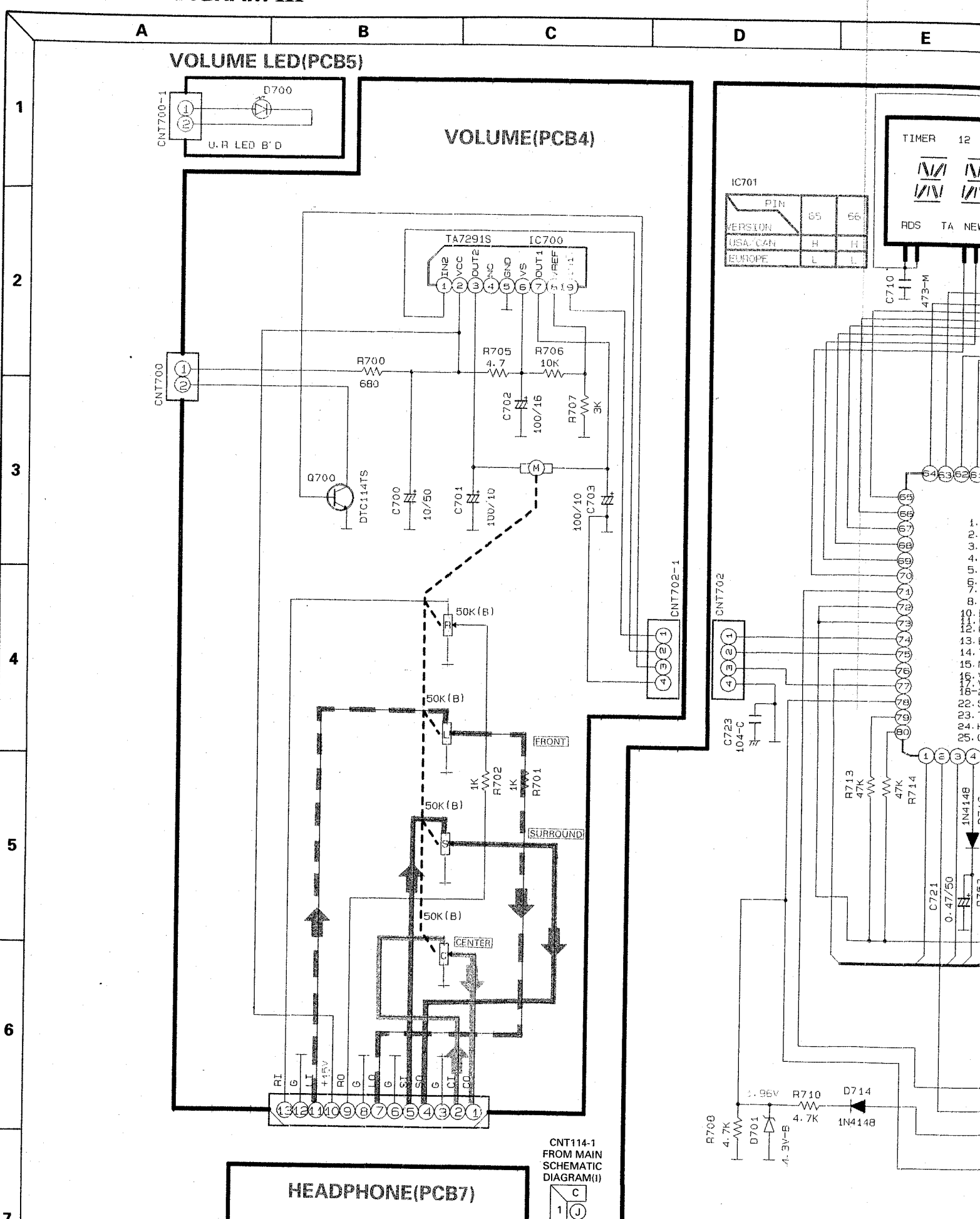
CAUTION

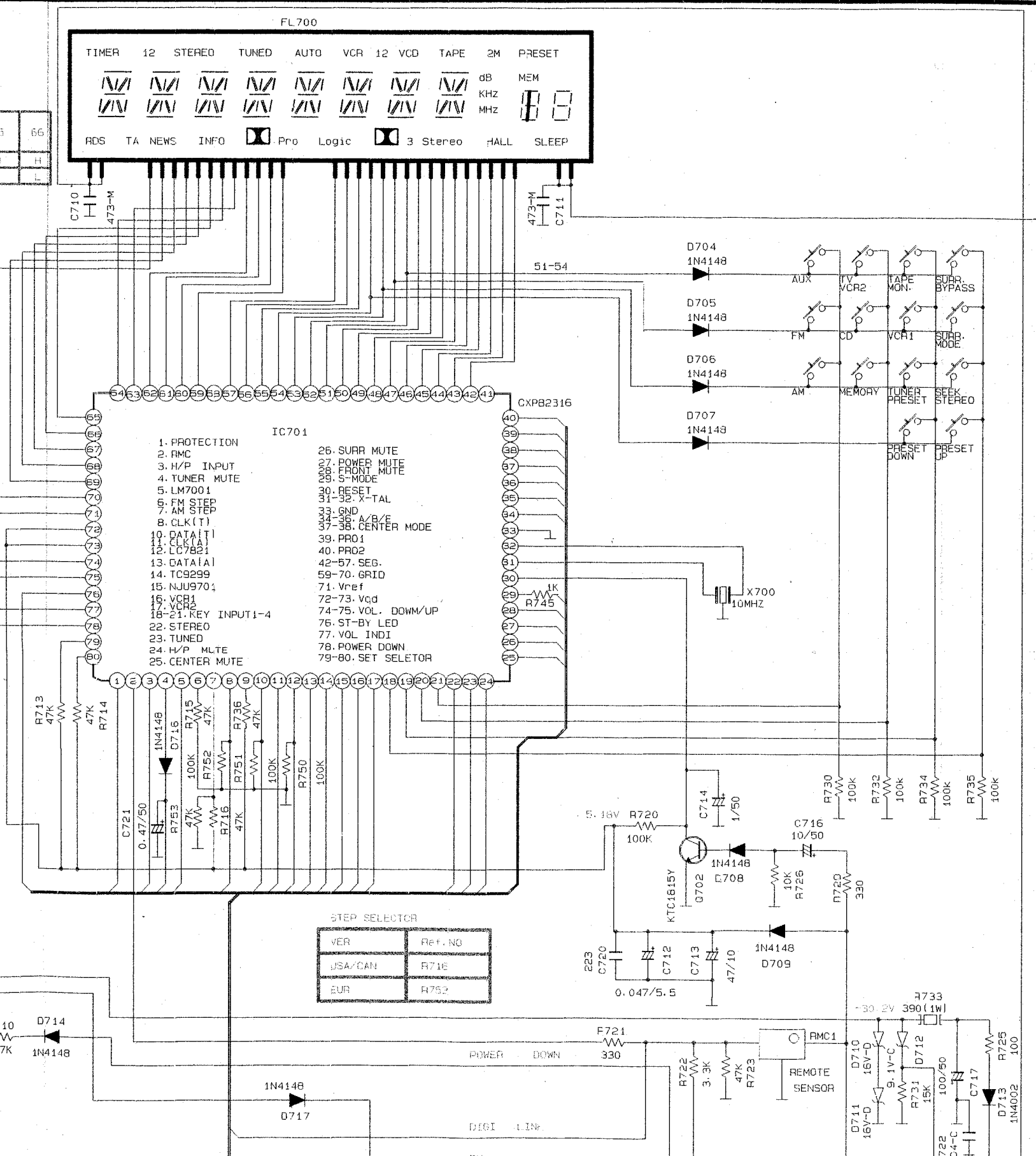
Safety precaution to be followed during servicing

1) Since those parts marked with ⚠ are critical parts for safety. Use only the one described in the parts list
2) Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

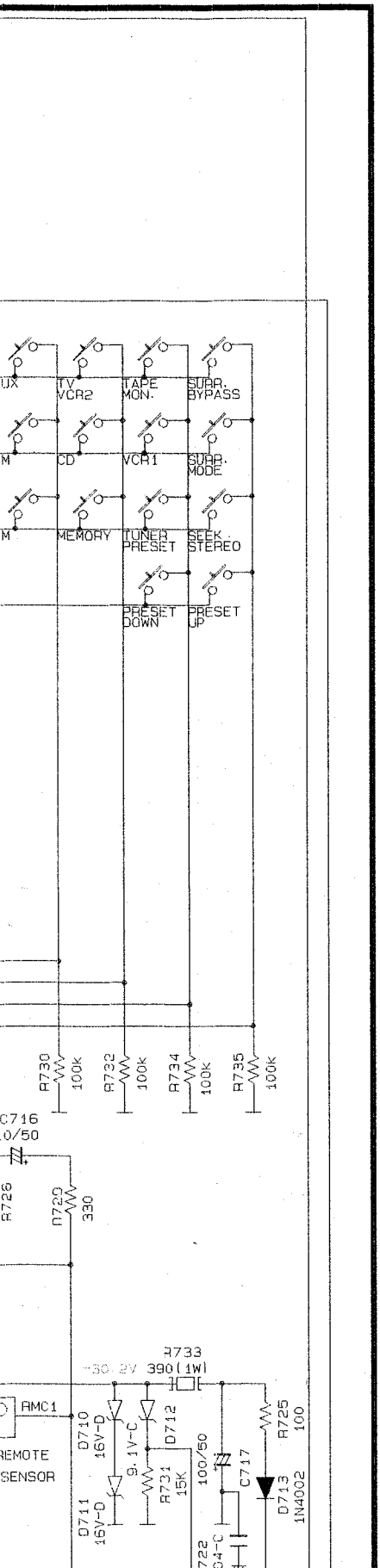
PIN CONNECTION DIAGRAM OF ICS.

SCHEMATIC DIAGRAM III

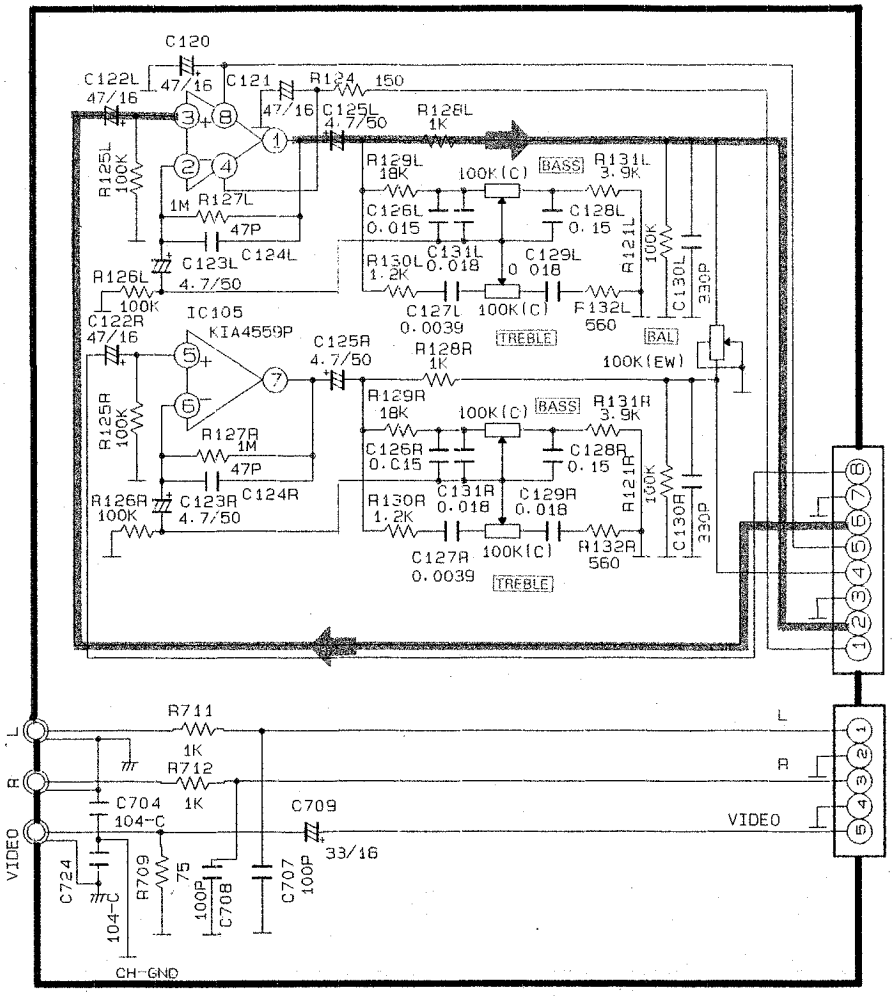



FL700
TIMER 12 STEREO TUNED AUTO VCR 12 VCD TAPE 2M PRESET
dB MEM
KHZ
MHZ
RDS TA NEWS INFO Pro Logic 3 Stereo HALL SLEEP
C710 473-M
473-M C711
51-54
D704 1N4148
D705 1N4148
D706 1N4148
D707 1N4148
AUX TV VCR2 TAPE MON. SURR. BYPASS
FM CD VCR1 SURR. MODE
AM MEMORY TUNER PRESET SEEK STEREO
PRESET DOWN PRESET UP
CXP82316
IC701
1. PROTECTION
2. RMC
3. H/P INPUT
4. TUNER MUTE
5. LM7001
6. FM STEP
7. AM STEP
8. CLK(T)
10. DATA(T)
11. CLK(A)
12. LC7821
13. DATA(A)
14. TC9299
15. NJU9701
16. VCR1
17. VCR2
18-21. KEY INPUT1-4
22. STEREO
23. TUNED
24. H/P MUTE
25. CENTER MUTE
26. SURR MUTE
27. POWER MUTE
28. FRONT MUTE
29. S-MODE
30. RESET
31-32. X-TAL
33. GND
34-36. A/B/E
37-38. CENTER MODE
39. PRO1
40. PRO2
42-57. SEG.
59-70. GRID
71. Vref
72-73. Vdd
74-75. VOL. DOWN/UP
76. ST-BY LED
77. VOL INDI
78. POWER DOWN
79-80. SET SELETOR
X700 10MHZ
1K R745
R713 47K
R714 47K
1N4148 D716
R715 47K
R736 47K
R752 100K
R751 100K
R750 100K
C721 0.47/50
R753 47K
R716 47K
R730 100K
R732 100K
R734 100K
R735 100K
5.16V R720 100K
C714 1/50
C716 10/50
1N4148 D708
KTC1815Y Q702
R726 10K
R729 330
1N4148 D709
C720 223
C712
C713 47/10
0.047/5.5
STEP SELECTOR
VER | Ref.NO
USA/CAN | R716
EUR | R752
D714 1N4148
1N4148 D717
POWER DOWN
R721 330
R722 3.3K
R723 47K
RMC1
REMOTE SENSOR
R733 390(1W)
-30.2V
D710 16V-D
D711 16V-D
9.1V-C
D712
R731 15K
100/50 C717
D713 1N4002
R725 100
DIGI LINK

I	J	K	L	M



TONE(PCB2)

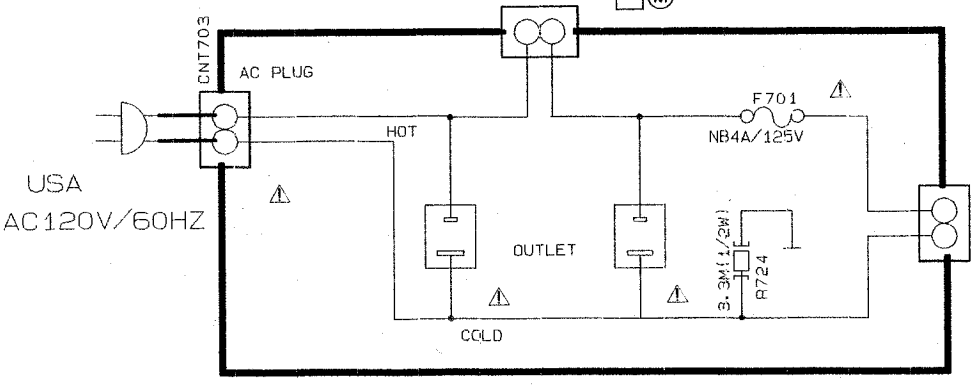


CNT116-1 FROM MAIN SCHEMATIC DIAGRAM(I) → A 6 I

CNT113-1 FROM MAIN SCHEMATIC DIAGRAM(I) → D I K

CNT122 TO HEADPHONE SCHEMATIC DIAGRAM(III) → C 8 M

OUTLET(PCB6)

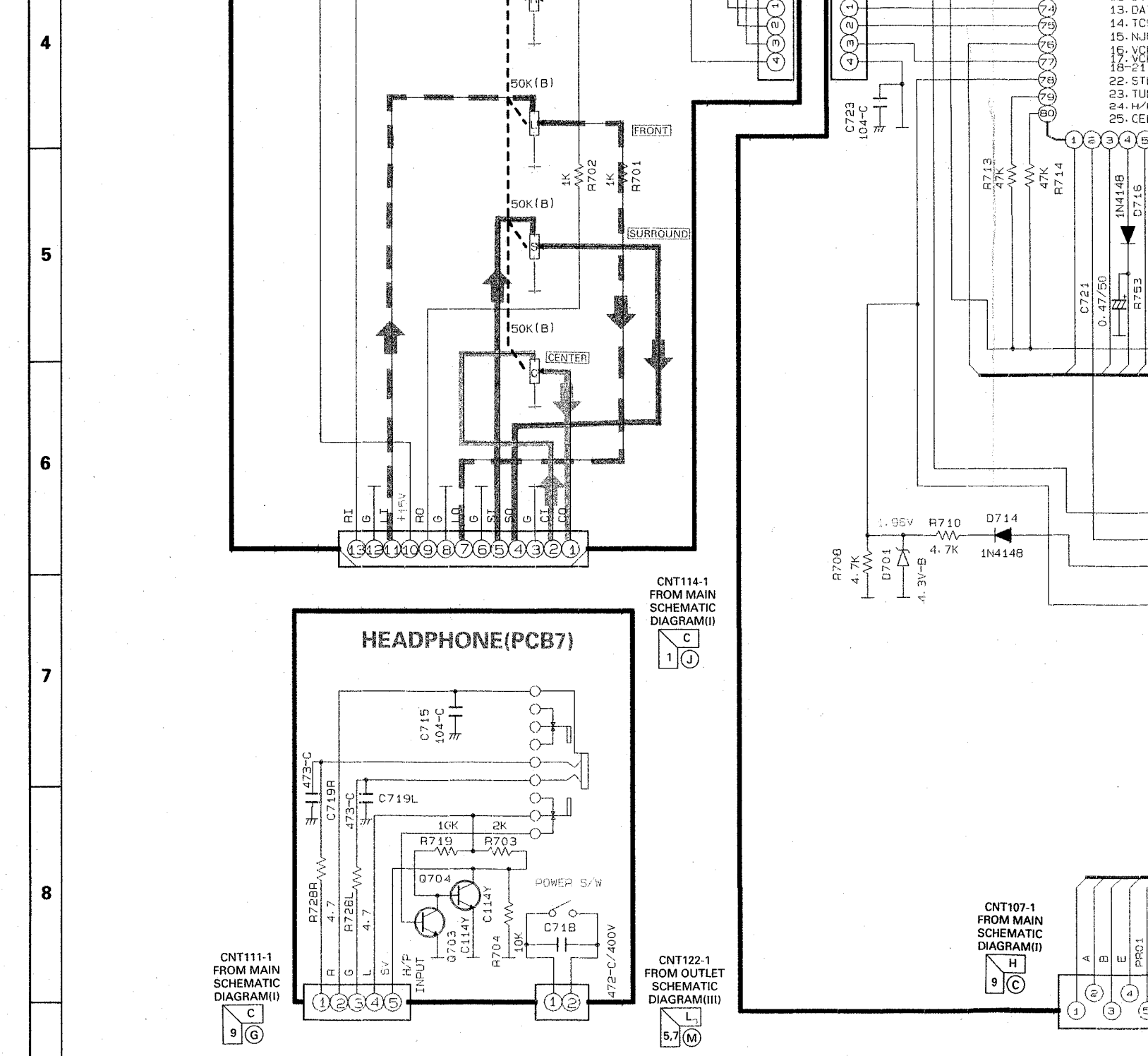


CNT101-1 FROM TRANS SCHEMATIC DIAGRAM(I) → L 6 N

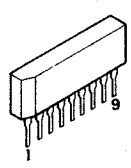
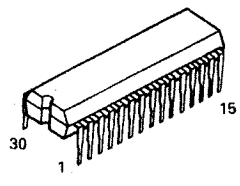
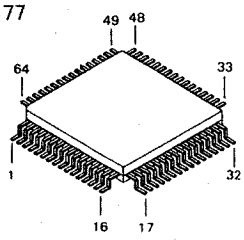
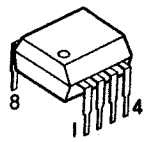
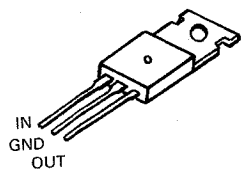
CNT122 TO HEADPHONE SCHEMATIC DIAGRAM(III) → C 8 M

OUTLET(PCB6)

CNT703
AC PLUG
F701



PIN CONNECTION DIAGRAM OF ICS.

TA7291S KIA4559S/KIA75559S	LC7821	NJM2177	KIA4559P/KIA7555P	KIA7806PI
				

13. DATA(A)
14. TC9299
15. NJU9704
16. VCR1
17. VCR2
18-21. KEY INPUT1-4
22. STEREO
23. TUNED
24. H/P MUTE
25. CENTER MUTE

42-57. SEG.
59-70. GRID
71. Vref
72-73. Vdd
74-75. VOL. DOWM/UP
76. ST-BY LED
77. VOL INDI
78. POWER DOWN
79-80. SET SELETOR

X700
10MHZ
R745 1K

R714 47K
D716 1N4148
R715 47K
R736 47K
R752 100K
R751 47K
R750 100K
C721 0.47/50
R753
R716 47K

R730 100K
R732 100K
R734 100K
R735 100K

C714 1/50
5.1V R720 100K
C716 10/50
1N4148 D708
Q702 KTC1815Y
R726 10K
R720 330

STEP SELECTOR

VER	Ref.NO
USA/CAN	R716
EUR	R753

C720 223
C712
C713
47/10
0.047/5.5
1N4148 D709

R733 390(1W) 30.2V
F721 330
POWER DOWN
RMC1 REMOTE SENSOR
R722 3.3K
R723 47K
D710 16V-D
D712 9.1V-C
R731 15K
D711 16V-D
C722 104-C
C717 100/50
R725 100
D713 1N4002

1N4148 D717
DIGI LINK
5V

R756 120
R757 120
R758 1K
Q705 KTC3198
Q701 KTC3198
R755 1K
D702 BI-COLOR

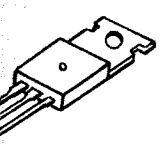
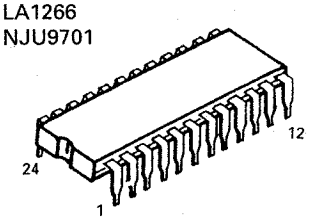
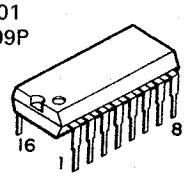
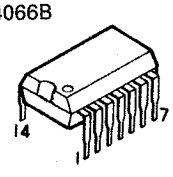
CNT107-1
FROM MAIN
SCHEMATIC
DIAGRAM(I)
H
C

A B E PRO1 WIDE NORMAL S-MODE SURR. MUTE CENTER MUTE VCR2 VCR1 9701ST 9299ST POWER MUTE FRONT MUTE DATA(A) 7821ST CLK(A) H/P INPUT D/L PROTECT H/P-MUTE 5V G PRO2 TUNED STEREO DATA(T) CLK(T) 7001ST TUNER MUTE

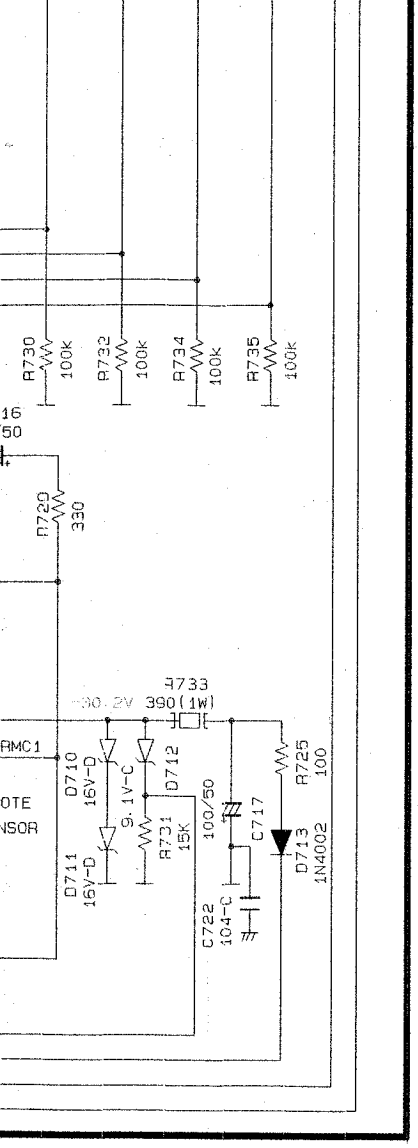
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

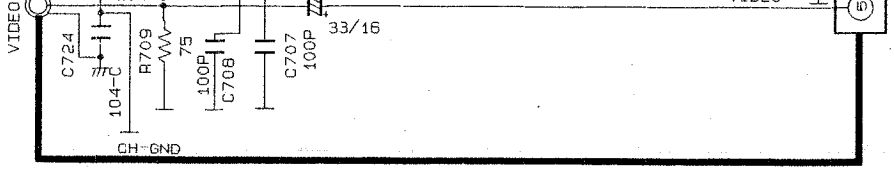
5 4 3 2 1

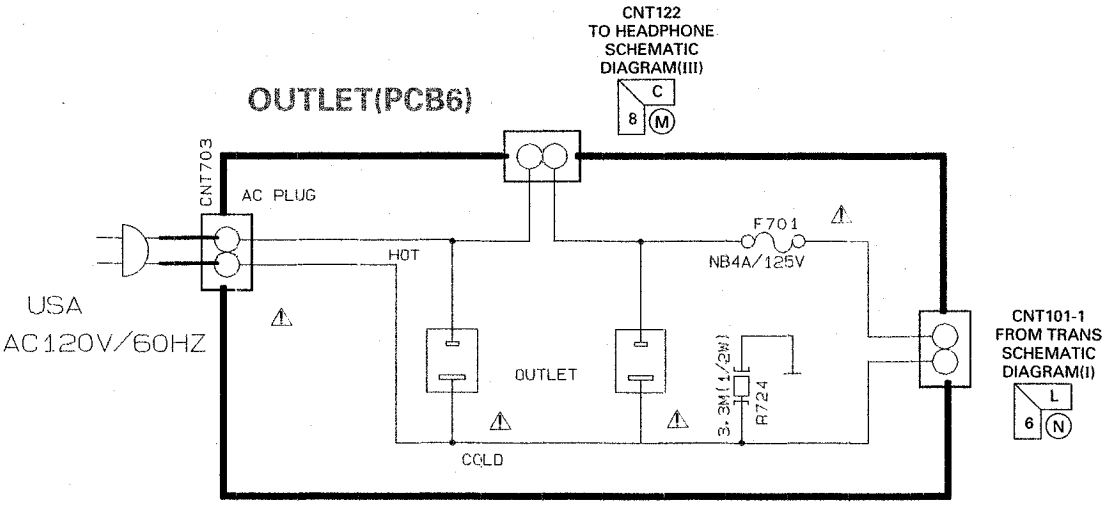
CNT105-1
FROM TRANS
SCHEMATIC
DIAGRAM(I)
K
8
A

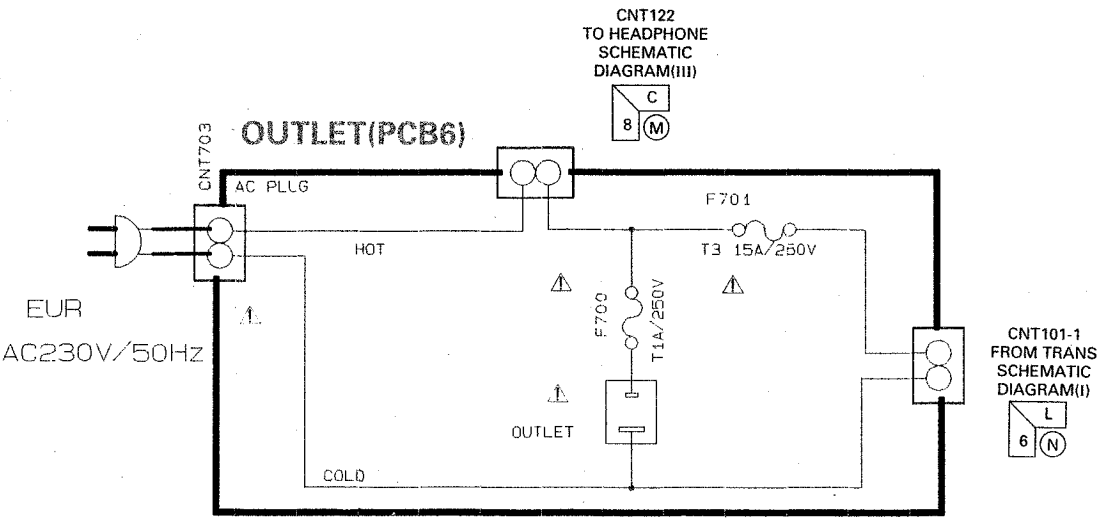
PI	LA1266 NJU9701	HA12016 LM7001 TC9299P	LC4966 GD4066B
			

SU
CE
FR









CNT105-1
ROM TRANS
SCHEMATIC
DIAGRAM(I)
K
8
A

SURROUND SIGNAL

CENTER SIGNAL

FRONT "L" ch SIGNAL

NOTES

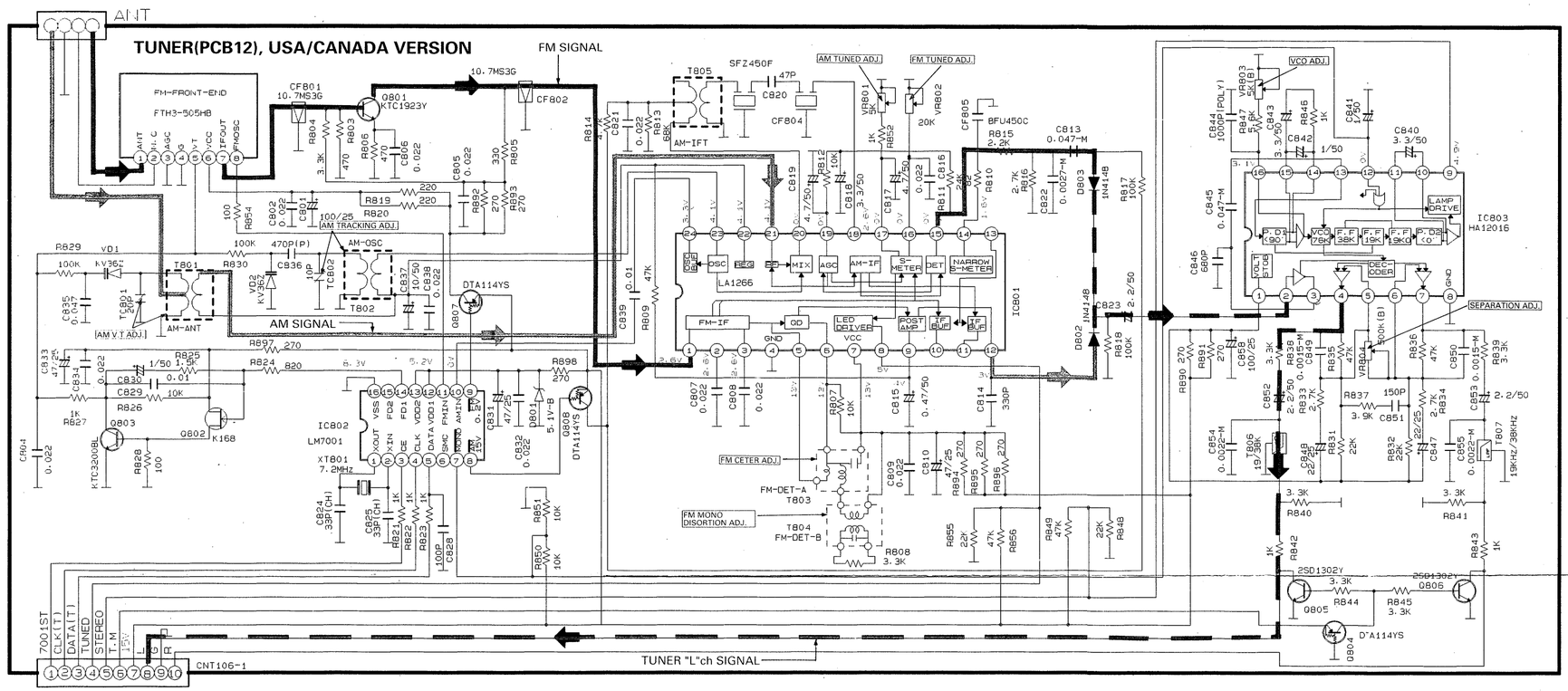
1. Resistor values are indicated in ohms unless otherwise specified
   [K=1,000 M=1,000,000]
2. Capacitor values are indicated in microfarades unless otherwise specified.
   [p=micro-microfarades]

CAUTION

Safety precaution to be followed during servicing

1) Since those parts marked with ⚠ are critical parts for safety. Use only the one described in the parts list
2) Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

SCHEMATIC DIAGRAM IV



NOTES

1. Resistor values are indicated in ohms unless otherwise specified. [K=1,000 M=1,000,000]
2. Capacitor values are indicated in microfarades unless otherwise specified. [p=micro-microfarades]

CAUTION!

Safety precaution to be followed during servicing.

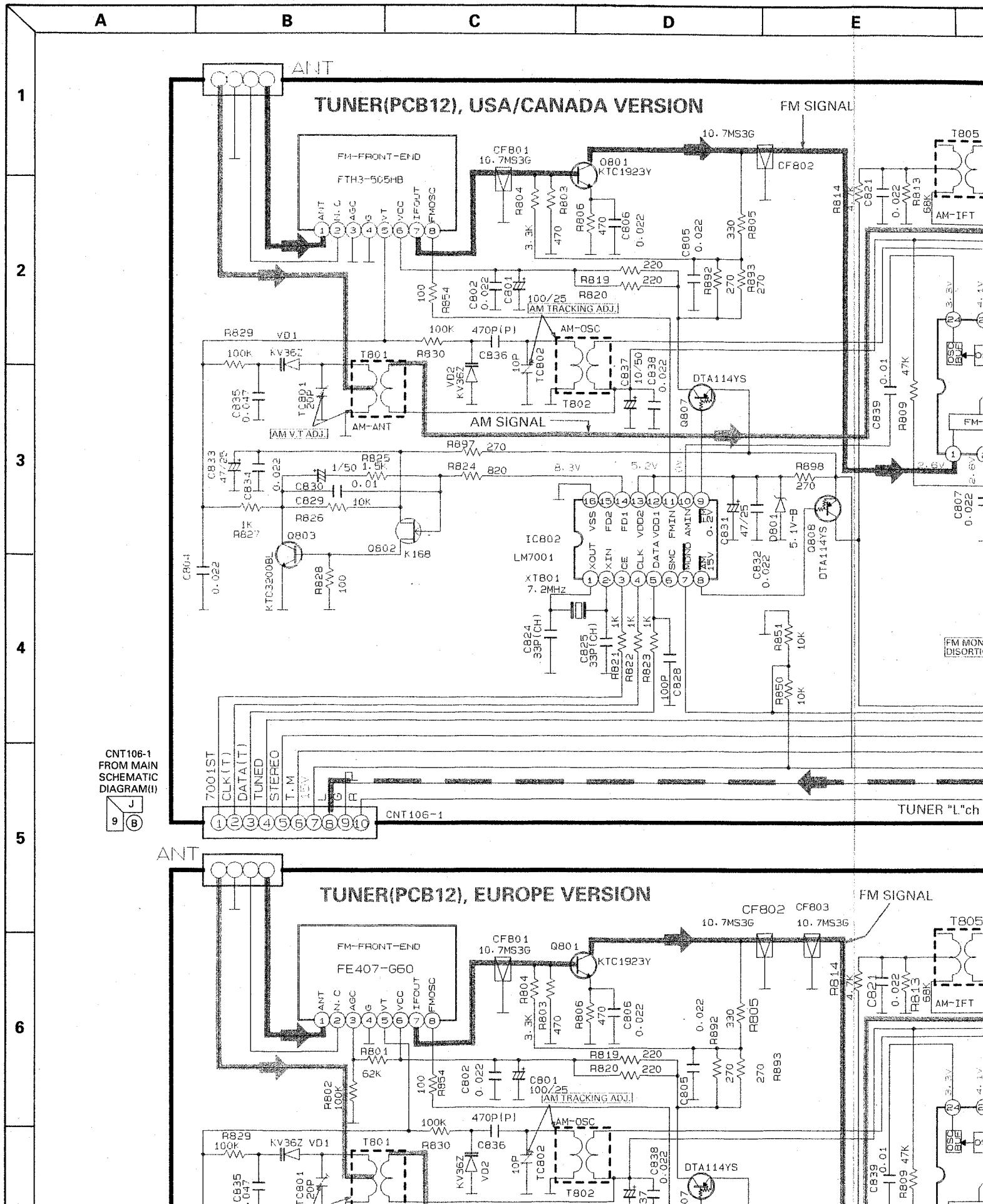
1) Since those parts marked with ! are critical parts for safety, use only the one described in the parts list.

2) Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

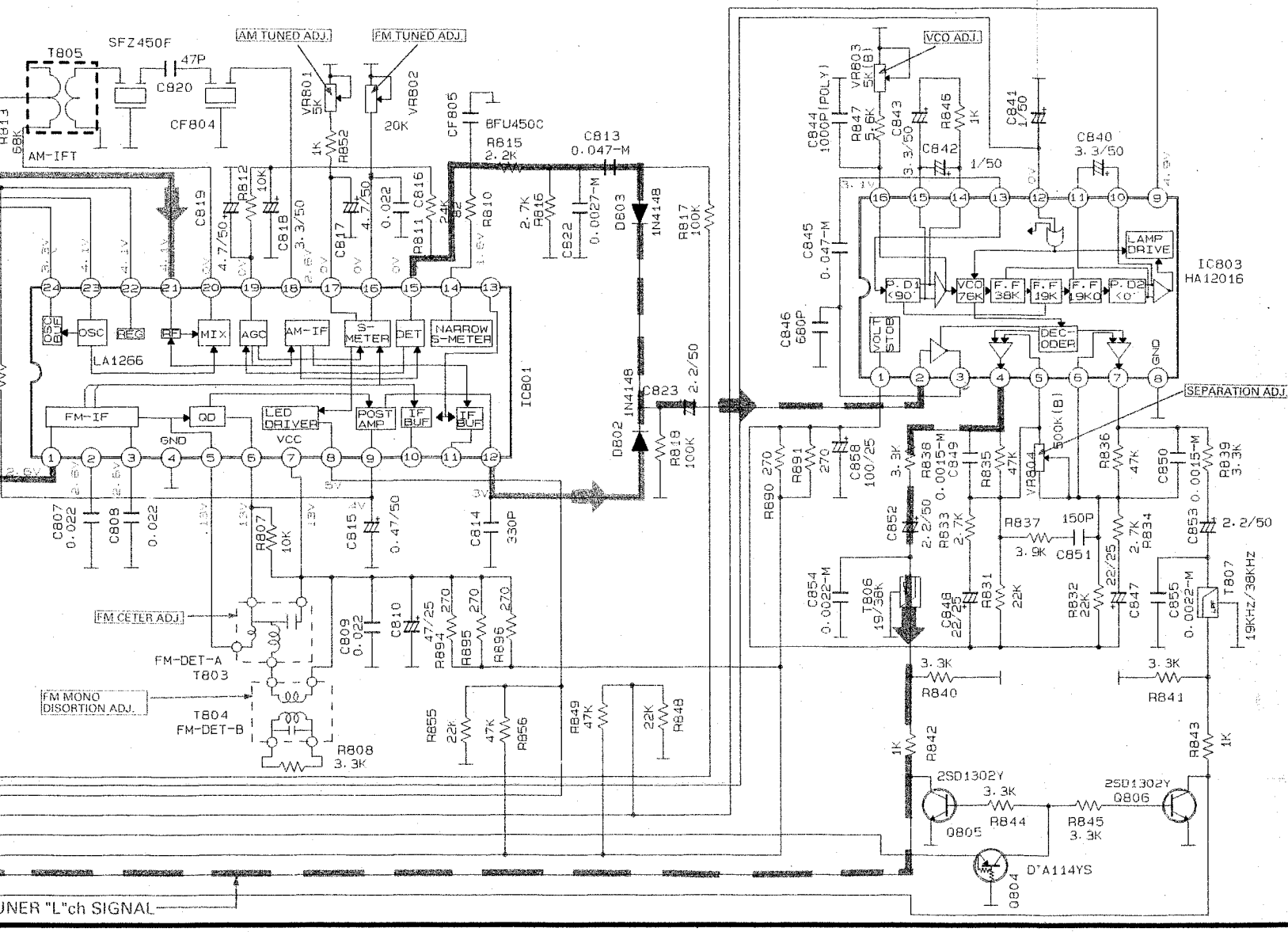
PIN CONNECTION DIAGRAM OF TRANSISTORS AND DIODES

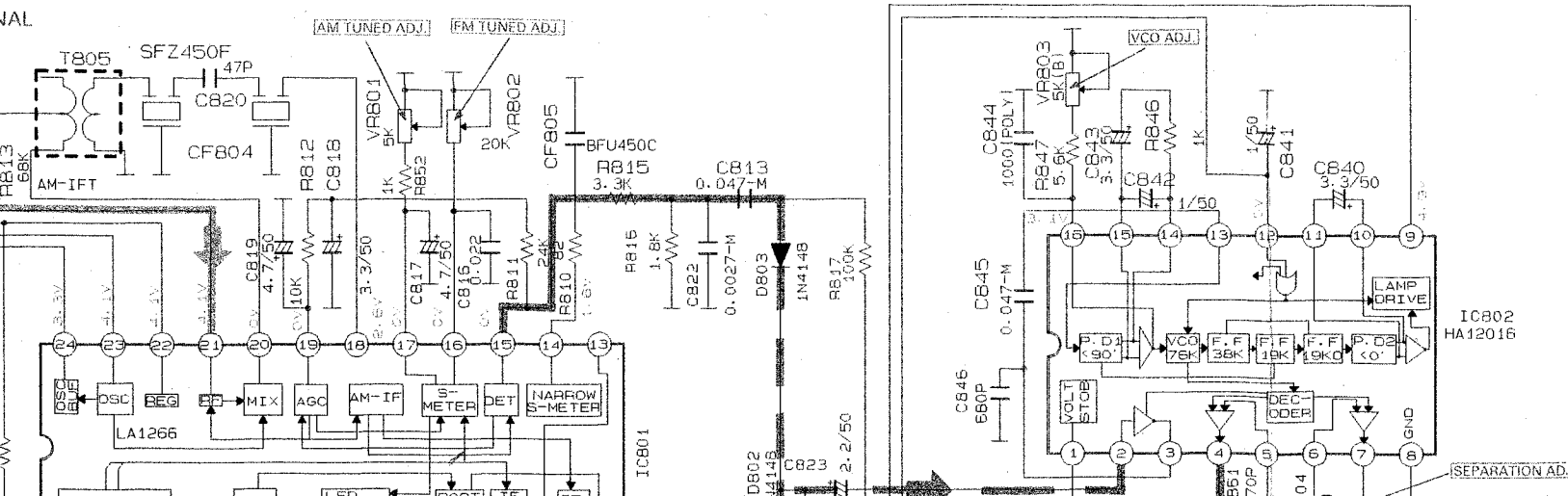
2SA1265N 2SC3182N KTB688 KTD718	2SC4137 KSC2690A KSA1220A	DTA114YS DTC114YS	SPR-54MDW3 SLR-40MG3	ZENER IN5402 IN4002 IN4148	2SK168	KTD1302 KTC2240/KTC3200 KTC3198/KTC1815 KTA1266/KTA1015Y KTA1268/KTA970BL	MPSA56Y	KV1236Z	PBL303	2SC4883A 2SA1859A	KTC2229/KTC3206 KTA949/KTA1024

SCHEMATIC DIAGRAM IV

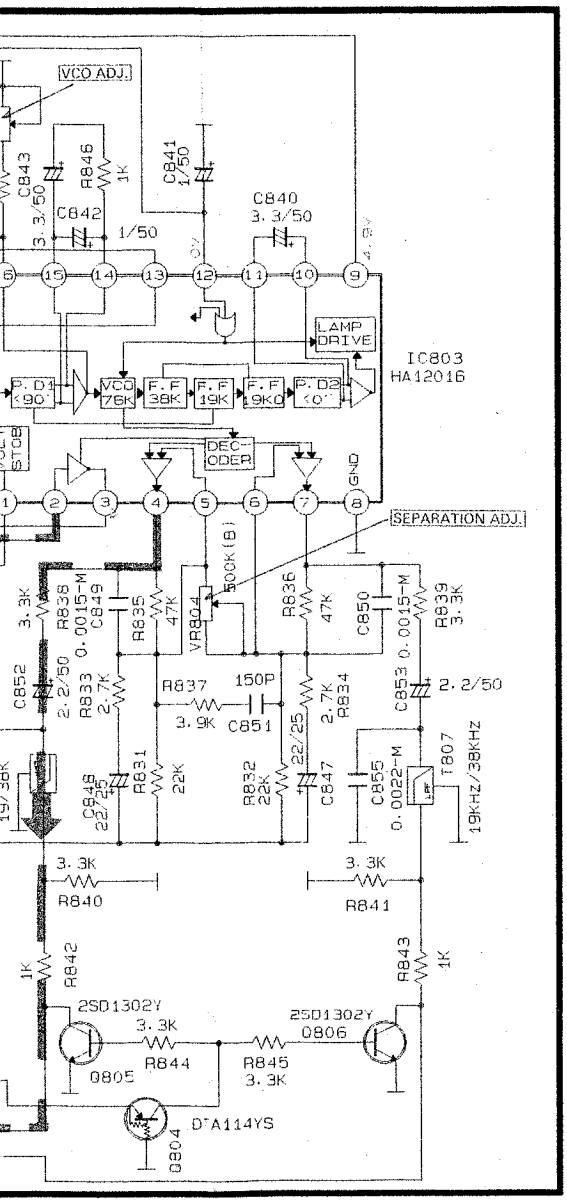


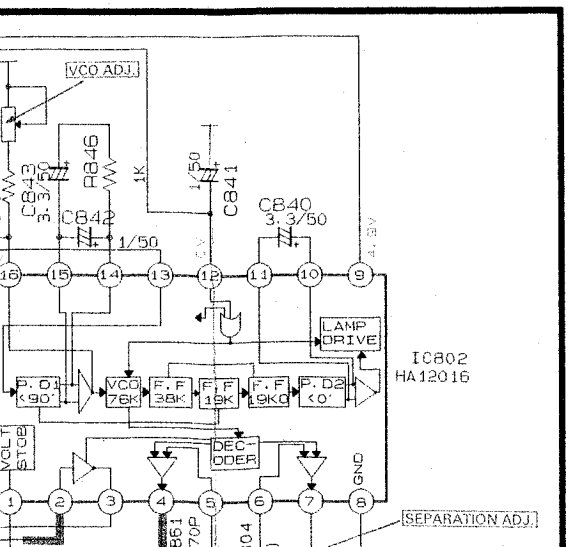
F	G	H	I	J


T805
SFZ450F
47P
C820
CF804
AM-IFT
AM TUNED ADJ.
FM TUNED ADJ.
VR801 5K
VR802 20K
CF805
BFU450C
R815 2.2K
C813 0.047-M
D803 1N4148
R817 100K
D802 1N4148
C823 2.2/50
R819 100K
IC801
LA1266
OSC BUF
OSC
REG
RF
MIX
AGC
AM-IF
S-METER
DET
NARROW S-METER
FM-IF
QD
LED DRIVER
POST AMP
IF BUF
GND
VCC
FM CETER ADJ.
FM-DET-A
T803
FM MONO DISORTION ADJ.
T804
FM-DET-B
R808 3.3K
VCO ADJ.
VR803 5K(B)
C844 1000P(POLY)
R847 5.6K
C843 3.3/50
R846 1K
C842 1/50
C841 1/50
C840 3.3/50
C845 0.047-M
C846 680P
LAMP DRIVE
P.D1 <90°
VCO 76K
F.F 38K
F.F 19K
F.F 19KO
P.D2 <0°
VOLT STOB
DEC-ODER
GND
IC803
HA12016
SEPARATION ADJ.
R838 0.0015-M
C849
R835 47K
VR804 500K(B)
R836 47K
C850
R839 3.3K
C852 2.2/50
R833 2.7K
R837 3.9K
150P
C851
R834 2.7K
C853 2.2/50
C854 0.0022-M
T806 19/38K
C848 22/25
R831 22K
R832 22K
C847 22/25
C855 0.0022-M
T807
19KHZ/38KHZ
R840 3.3K
R841 3.3K
R842 1K
R843 1K
2SD1302Y
Q805
R844 3.3K
R845 3.3K
2SD1302Y
Q806
D'A114YS
Q804
TUNER "L"ch SIGNAL

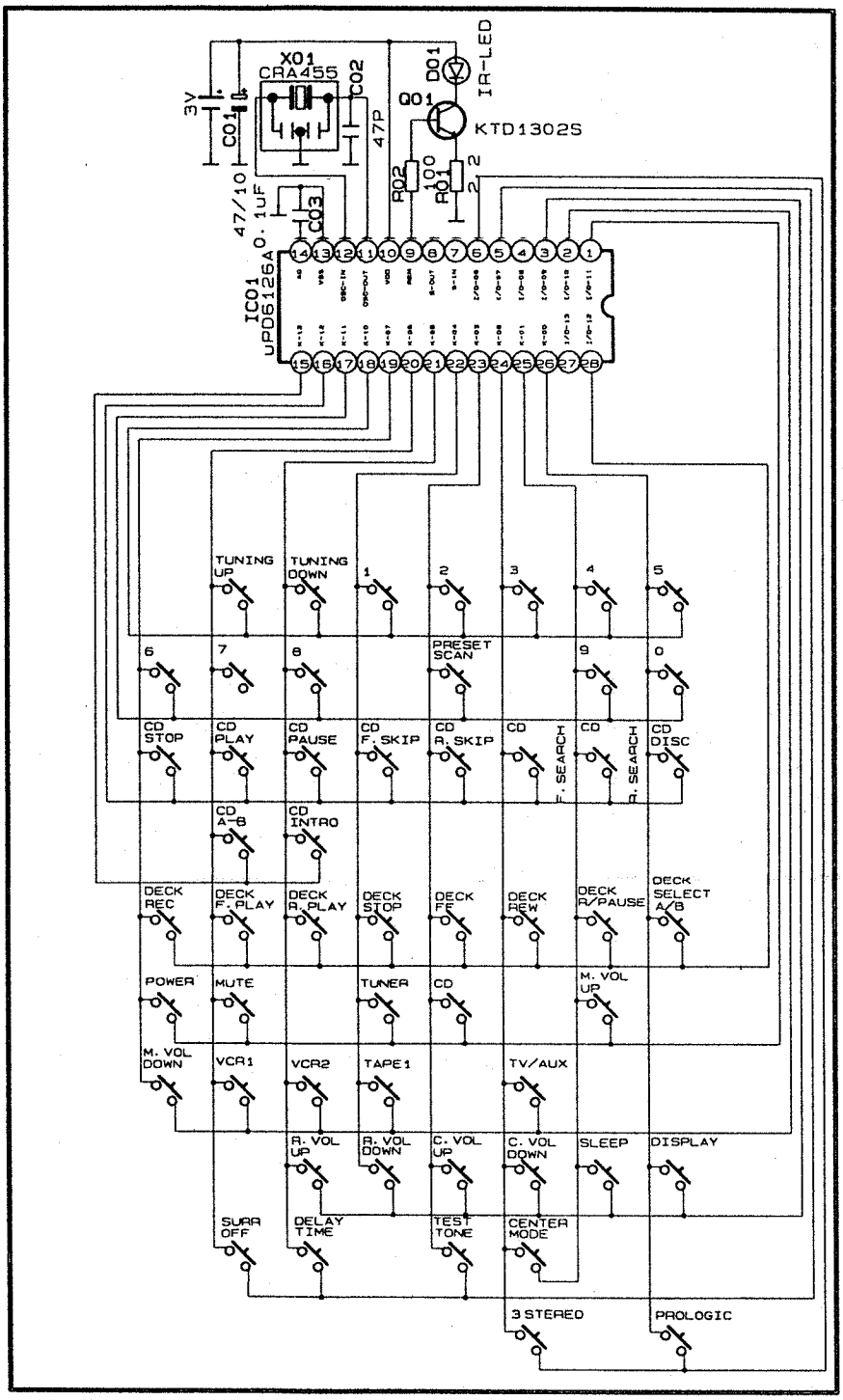

T805
SFZ450F
47P
C820
CF804
AM-IFT
AM TUNED ADJ.
FM TUNED ADJ.
VR801 5K
VR802 20K
CF805
BFU450C
R815 3.3K
C813 0.047-M
D803 1N4148
R817 100K
D802 1N4148
C823 2.2/50
R819 100K
IC801
LA1266
OSC BUF
OSC
REG
RF
MIX
AGC
AM-IF
S-METER
DET
NARROW S-METER
VCO ADJ.
VR803 5K(B)
C844 1000P(POLY)
R847 5.6K
C843 3.3/50
R846 1K
C842 1/50
C841 1/50
C840 3.3/50
C845 0.047-M
C846 680P
LAMP DRIVE
P.D1 <90°
VCO 76K
F.F 38K
F.F 19K
F.F 19KO
P.D2 <0°
VOLT STOB
DEC-ODER
GND
IC802
HA12016
SEPARATION ADJ.

I	J	K	L	M





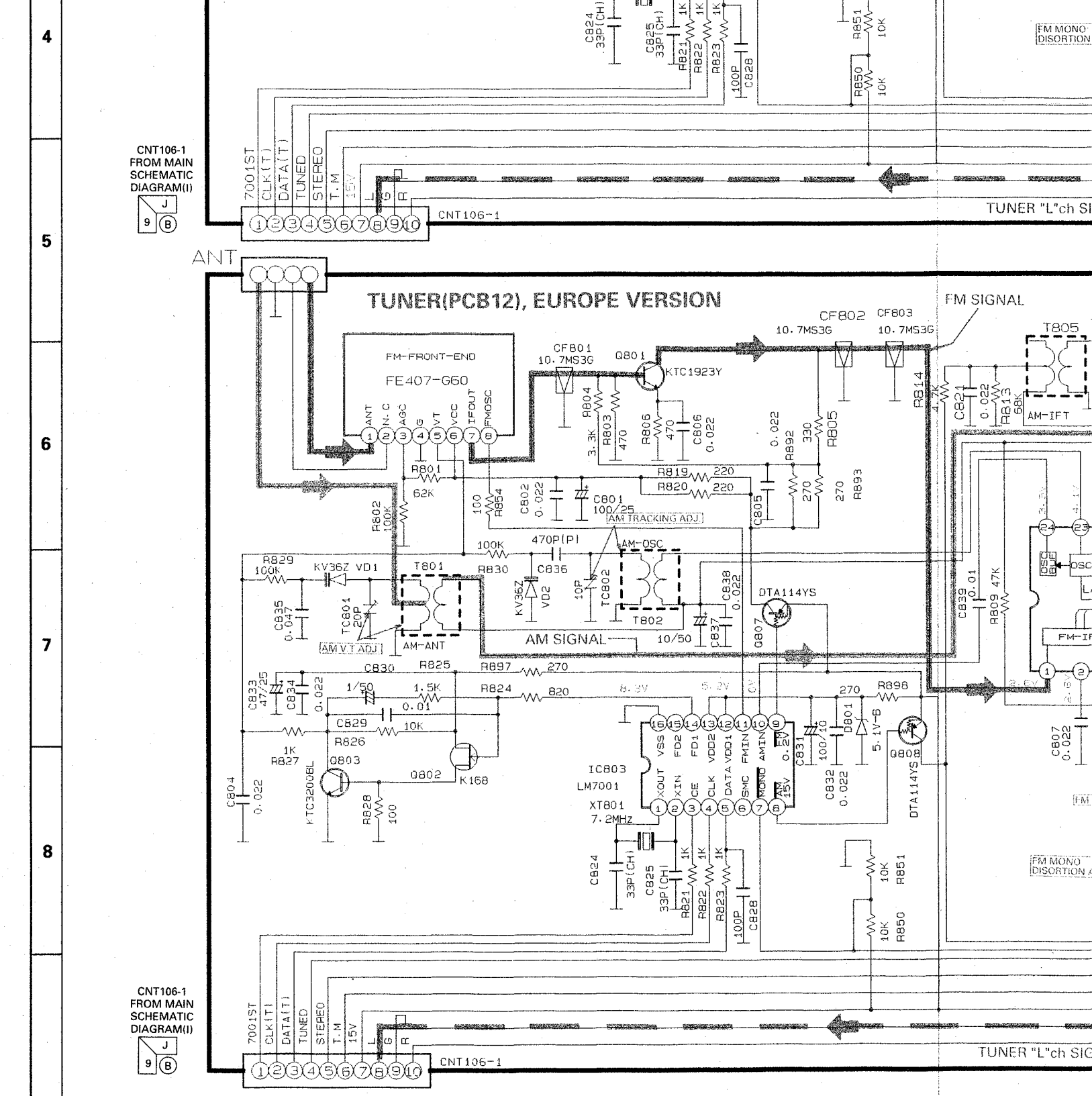
COMMANDER



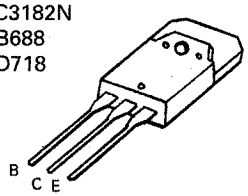
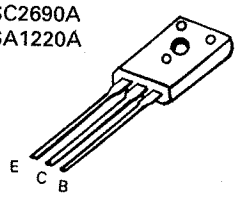
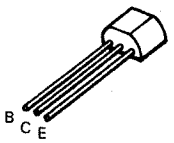
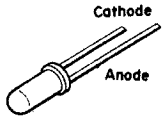
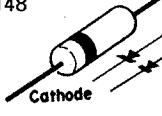
FM SIGNAL

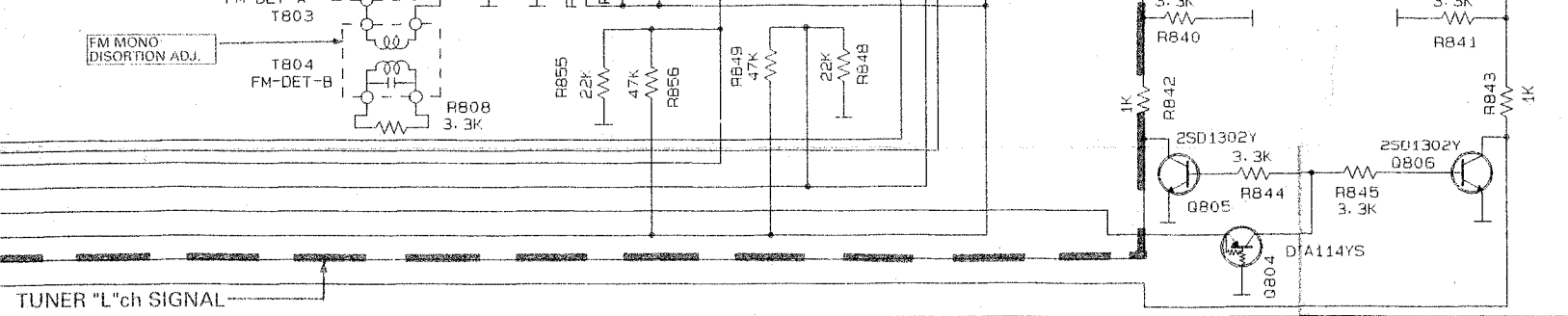
AM SIGNAL

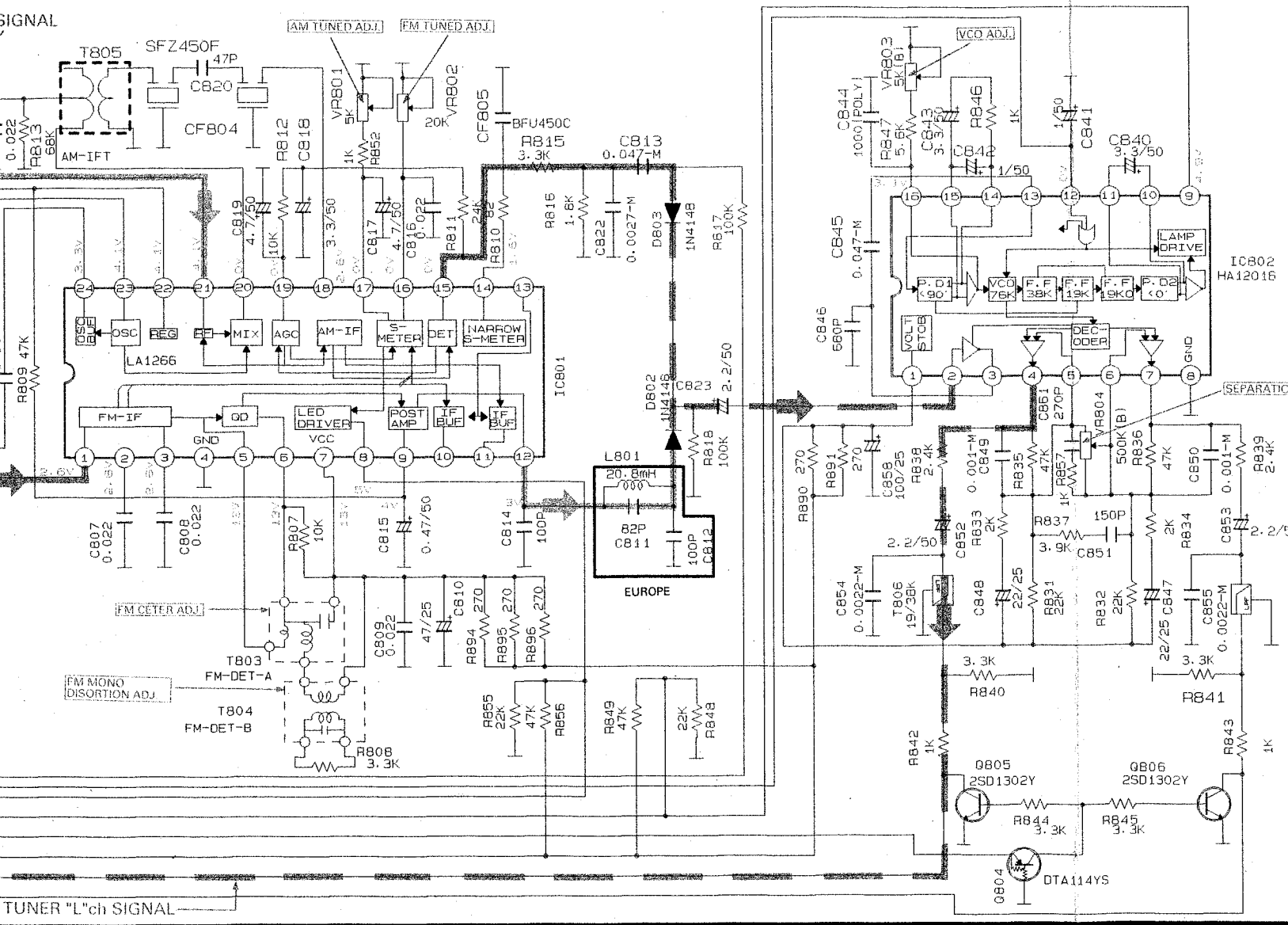
TUNER "L" ch SIGNAL

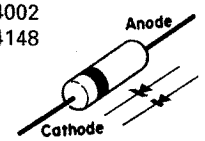
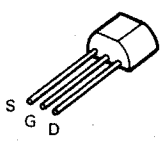
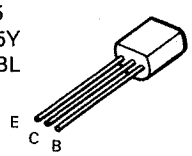
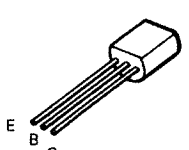
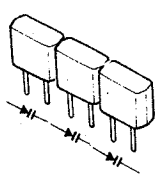
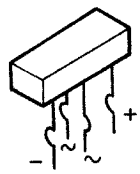


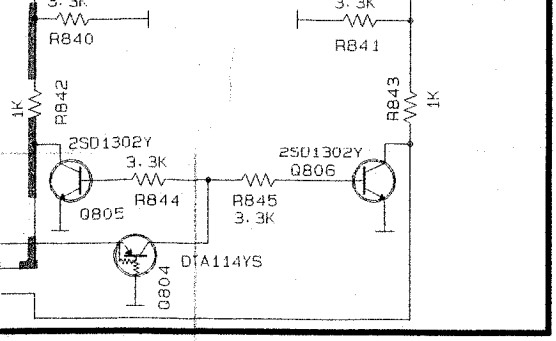
PIN CONNECTION DIAGRAM OF TRANSISTORS AND DIODES

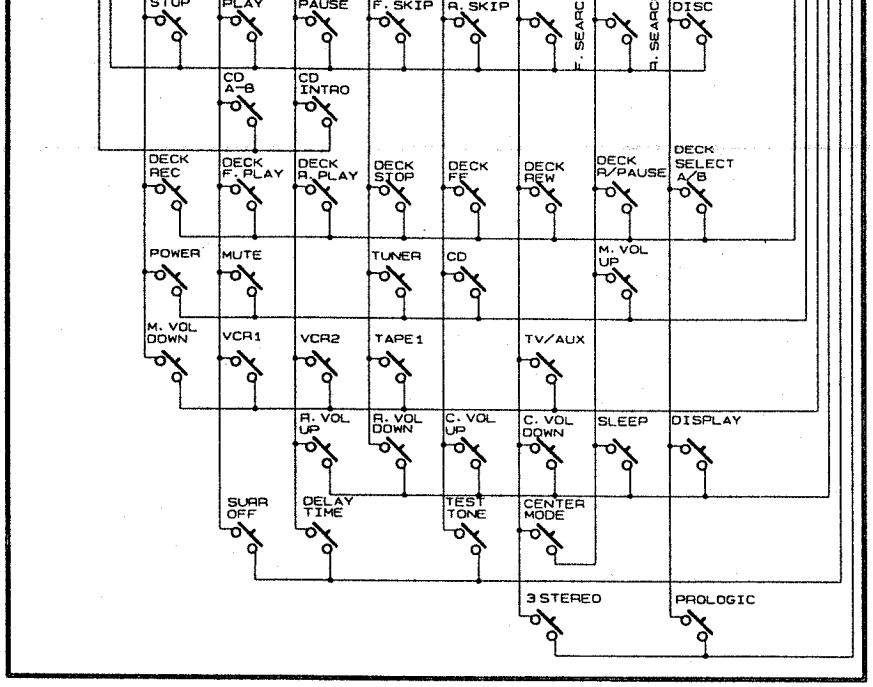
2SA1265N 2SC3182N KTB688 KTD718	2SC4137 KSC2690A KSA1220A	DTA114YS DTC114YS	SPR-54MDW3 SLR-40MG3	ZENER IN5402 IN4002 IN4148
				

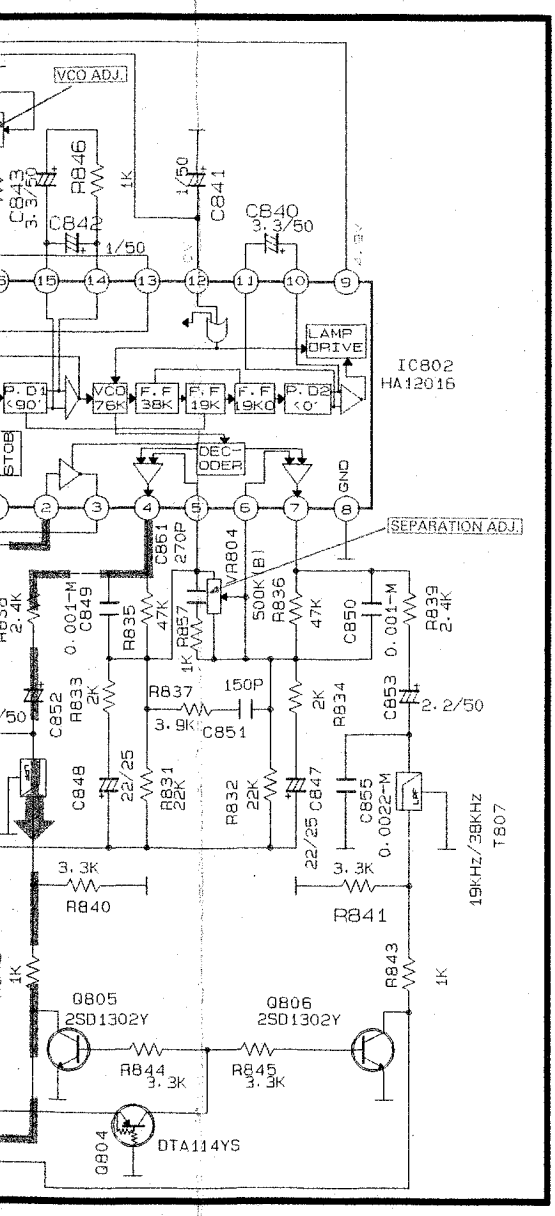




NER 5402 4002 4148 	2SK168 	KTD1302 KTC2240/KTC3200 KTC3198/KTC1815 KTA1266/KTA1015Y KTA1268/KTA970BL 	MPSA56Y 	KV1236Z 	PBL303 







FM SIGNAL

AM SIGNAL

TUNER "L" ch SIGNAL

NOTES

1. Resistor values are indicated in ohms unless otherwise specified
   [k=1,000 M=1,000,000 !]
2. Capacitor values are indicated in microfarades unless otherwise specified.
   [p=micro-microfarades]

CAUTION

Safety precaution to be followed during servicing

1) Since those parts marked with ⚠ are critical parts for safety, use only the one described in the parts list

2) Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

1236Z	PBL303	2SC4883A 2SA1859A	KTC2229/KTC3206 KTA949/KTA1024